Museum 0974

# THE ARCHITECTS' JOURNAL



standard

contents

AA

every issue does not necessarily contain all these contents, but they are the regular features which continually recur

NEWS and COMMENT

Astragal's Notes and Topics

Letters

News

Diary

Criticism

TECHNICAL SECTION

Information Sheets

Information Centre

Current Technique

Working Details

Questions and Answers

Prices

The Industry

## CURRENT BUILDING

Major Buildings described:

Details of Planning, Construction,

Finishes and Costs

Buildings in the News

Building Costs Analysed

Architectural Appointments Wanted and Vacant

No. 3425] [Vol. 132 THE ARCHITECTURAL PRESS

9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1. 'Phone: Whitehall 0611

Price 1s. od. Registered as a Newspaper \* A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their addresses and telephone numbers. The glossary is published in two parts—A to Ii one week. Il to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

Architectural Association, 34/6, Bedford Square, W.C.1.

AAI	Association of Art Institutions. Secy.: J. H. Holden,
ABS ABT ACGB ADA ARCUK BAE BASA BC BCC BCCF BCIRA BDA BE BEDA BIA	College of Art, Cavendish Street, Manchester 15 Architecta' Benevolent Society. 66, Portland Place, W.1. Association of Building Technicians. 1, Ashley Place, S.W.1. Arts Council of Great Britain. 4, St. James's Square, S.W.1. Arthitects' Registration Council. 68, Portland Place, W.1. British Architectural Education. 66, Portland Place, W.1. Building Centre, 26, Store Street, W.2. British Architectural Students Association. Building Centre, 26 Store Street, W.C.1. Building Centre, 26, Store Street, Tottenham Court Road, W.C.1. British Colour Council. 13, Portland Square, W.1. British Cast Iron Research Association. Alvechurch, Brimingham. British Colour Research Association. Alvechurch, Brimingham. British Door Association. 10, The Boltons, S.W.10. British Electrical Development Association, 2, Savoy Hill, W.C.2. Temple Bar 9434 British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.
BID BINC BOT BRS BSA BSI CABAS	Building Industries Distributors. 52, High Holborn, W.C.1. Building Industries National Council. 11, Weymouth Street, W.1. Board of Trade. Whitehall Gardens, Horseguards Avenue, S.W.1. Building Research Station. Bucknalls Lane, Watford. Building Societies Association. 14, Park Street, W.1. British Standards Institution. British Standards House, 2, Park St., W.1. Mayfair 9000 City and Borough Architects Society. C/o S. A. G. Cook, A.R.I.B.A., Borough Architect and Director of Housing, Town Hall, High Holborn, W.C.1.
CAS CCA CDA COID CPRE CUC DIA EJMA	County Architects' Society. C/o J. Hurst, A.R.I.B.A., County Hall, Dorchester. Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1. Belgravia 6661 Copper Development Association. 55, South Audley Street, W.1. Grosvenor 8811 Council of Industrial Design. 28, Haymarket, S.W.1. Trafalgar 3000 Council for the Preservation of Rural England, 4, Hobart Place, S.W.1. Sloane 4280 Coal Utilization Council. 3, Upper Belgrave Street, S.W.1. Sloane 9116 Design and Industries Association. 13, Suffolk Street, S.W.1. Whitehall 0540 English Joinery Manufacturers' Association (Incorporated). Sackville House,
EPNS FAS FASS	English Place-Name Society. 7, Selwyn Gardens, Cambridge. Faculty of Architects and Surveyors. 68, Gloucester Place, W.1. Welbeck 9966 Federation of Associations of Specialists and Sub-Contractors,
FBBDO	14, Bryanston Street, W.1. Welbeck 1781 Fibre Building Board Development Organization Ltd. (Fidor), Stafford House, Norfolk Street, W.C.2. Covent Garden 3000
FBI FC FCMI FDMA FLD FMB FPC FRHB	Norfolk Street, W.C.2. Covent Garden 3008  Norfolk Street, W.C.2. Covent Garden 3008  Whitehall 6711  Forestry Commission. 25, Savile Row, W.1. Regent 0221  Federation of Coated Macadam Industries. 37, Chester Square, S.W.1. Sloane 1002  Flush Door Manufacturers Association Ltd. Trowell, Nottingham. Ilkeston 623  Friends of the Lake District. Pennington House, nr. Ulverston, Lancs. Ulverston 201  Federation of Master Builders. 33, John Street, W.C.1. Tel.: Chancery 7583 (6 lines)  Federation of Painting Contractors, St. Stephen's House, S.W.1. Whitehall 3902  Federation of Registered House Builders. 82, New Cavendish Street, W.1.  Langham 4341
GPDA	Cypsum Plasterboard Development Amociation. 11, fronmonger Lane, E.C.Z.
GC GG HC IAAS	Gas Council. 1, Grosvenor Place, S.W.1.  Georgian Group. 2, Chester Street, S.W.1.  Housing Centre. 13, Suffolk Street, S.W.1.  Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.
ICA ICE IEE	Institute of Contemporary Arts. 17-18, Dover Street, W.1. Grosvenor 6186 Institution of Civil Engineers. 1, Great George Street, S.W.1. Whitehall 4577 Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.
IES IGE IHVE	Illuminating Engineering Society. 32, Victoria Street, S.W.1. Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1. Institution of Heating and Ventilating Engineers. 49, Cadogan Square.
IIBDID	Sloane 1601/3158 Incorporated Institute of British Decorators and Interior Designers. 100, Park Street, Grosvenor Square, W.1. Mayfair 7086



### - FLOORING SPECIALISTS FOR 100 YEARS

IMMOVABLE-ACME HARDWOOD FLOORS

**ACMEPAVING FACTORY FLOORS** 

ACMETYLE SOLID P.V.C. TILES AND SHEET

ACMELYNO LINOLEUM

ACMECORK CORK TILES

ACMETRED RUBBER FLOORING

ACMEPYLE FITTED CARPETS

**ACME FLOOR RENOVATION SERVICE** 

Technical Brochures gladly sent on request,



FLOORING & PAVING CO. (1904) LIMITED

RIVER ROAD, BARKING, ESSEX. RIPploway 2771 (P.B.X.)



Our Beam system gives a maximum of standardization to obtain economy and yet at the same time allows complete freedom to architectural planning.

# SOMMERFELDS

## LATTICE BEAMS

These beams are widely used in the modern planning of factories, school classrooms, offices, canteens, etc., where spans of 20t to 40t. are encountared. They are most economic for all light roofing, combine well with the many prefabricated slabs which span directly between upporting joists.

Our Structural Design Office are pleased to advise and quote for THE COMPLETE STEELWORK OF ANY PROJECT.

Please write for full details and data sheets.

Head Office: WELLINGTON SHROPSHIRE ENGLAND Tel: Wellington 1000 London Office: 167 VICTORIA ST LONDON S.W.I. Tel: Vic 8843 & 1000



Problem: FUMES

Solution:



COLT Ventilation

Place:

ARTHUR GUINNESS SON & CO Pomona Docks, Manchester Region.



Exhaust gases from fork lift trucks and lorries were once a major problem in this storage shed. Colt experts were called in to make a scientific analysis and on their recommendation a series of Colt S.R.C./3080 High Duty Extract Ventilators was installed. Fumes no longer bother anyone.

In providing a permanent solution to this ventilation problem Colt have added yet another chapter to their record of success success which has brought repeat orders from many world-famous

Ask your secretary to send for a free manual to Dept. 38

COLT VENTILATION LIMITED SURBITON SURREY TELEPHONE: ELMBRIDGE 0161



- FLOORING SPECIALISTS FOR 100 YEARS

IMMOVABLE-ACME HARDWOOD FLOORS

**ACMEPAVING FACTORY FLOORS** 

ACMETYLE SOLID P.V.C. TILES AND SHEET

ACMELYNO LINOLEUM

ACMECORK CORK TILES

ACMETRED RUBBER FLOORING

**ACMEPYLE FITTED CARPETS** 

**ACME FLOOR RENOVATION SERVICE** 

Technical Brochures gladly sent on request.



FLOORING & PAVING CO. (1904) LIMITED

RIVER ROAD, BARKING, ESSEX. RIPploway 2771 (P.B.X.)



Our Beam system gives a maximum of standardization to obtain economy and yet at the same time allows complete freedom to architectural planning.

SOMMERFELDS

## LATTICE BEAMS

AND OF COURSE STANCHIONS

These beams are widely used in the modern planning of factories, school classrooms, offices, canteens, etc., where spans of 20ft to 40ft, are encountered.

They are most economic for all light roofing, combine well with the many prefabricated slake which span directly between apporting joists.

Our Structural Design Office are pleased to advise and quote for THE COMPLETE STEELWORK OF ANY PROJECT.

Please write for full details and data sheets.

Head Office: WELLINGTON SHROPSHIRE ENGLAND Tel: Wellington 1000 London Office: 167 VICTORIA ST LONDON S.W.I. Tel: Vic 8843 & 1000



Problem: FUMES

Solution:



Ventilation

Place:

ARTHUR GUINNESS SON & CO Pomona Docks, Manchester Region.

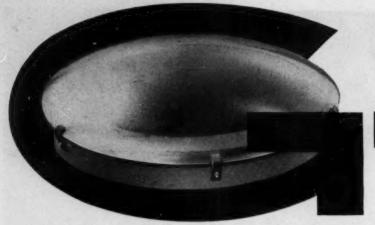


Exhaust gases from fork lift trucks and lorries were once a major problem in this storage shed. Colt experts were called in to make a scientific analysis and on their recommendation a series of Colt S.R.C./3080 High Duty Extract Ventilators was installed. Fumes no longer bother anyone. .

In providing a permanent solution to this ventilation problem Colt have added yet another chapter to their record of success-success which has brought repeat orders from many world-famous concerns.

Ask your secretary to send for a free manual to Dept. '38

COLT VENTILATION LIMITED SURBITON SURREY TELEPHONE: ELMBRIDGE 0161

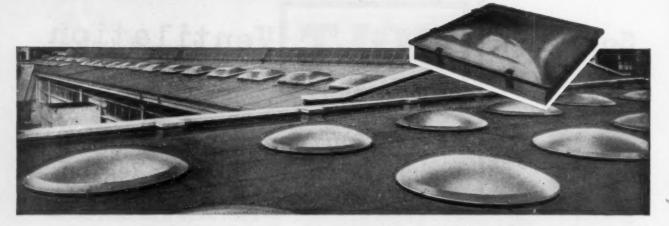


lass

roof domes



last for ever!



- · pass ample light
  - · need no maintenance
- · are fire resistant
  - · never lose their shape

Glass roof domes have many advantages over other forms of roof lighting . . . they last for ever, pass ample light, and are fire resistant.

Glass roof domes are leak-proof, and easy to fix on metal, wood or concrete curbs; they need no maintenance and never lose their shape.

Think of glass roof domes for your next building.



specify **GLASS** roof domes

lass Benders Association

6 MOUNT ROW, LONDON, W.1. MAYFAIR 8334

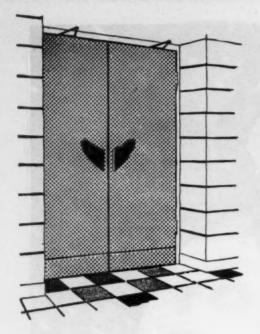


Supplied in Free and Non-returnable 40-gallon, 5-gallon and 1-gallon containers

Obtainable from your Builders Merchants, or EVODE LIMITED

A PRODUCT OF OF STAFFORD

ROOF WATERPROOFING . CONCRETE ADMIXTURES AND HARDENERS . PROTECTIVE PAINTS AND BITUMINOUS COATINGS . GAP AND JOINT SEALING MASTICS AND GUNS . INDUSTRIAL ADMESIVES \* SEND FOR LITERATURE EVODE LTD., (BUILDING CHEMICALS DIVISION) STAFFORD. Phone: 2241 (5 lines)
London Office: 82 VICTORIA STREET, S.W.I. Telephone: ABBey 4622 (3 lines)

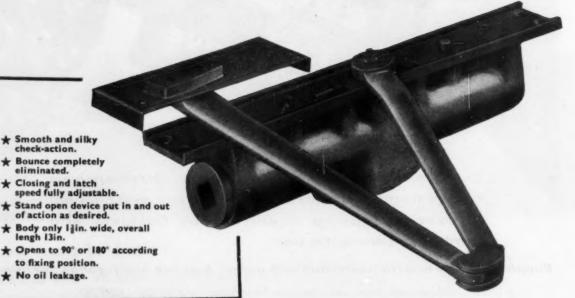


# Only the SLIM arms can be seen

The "BRITON 500" is a door closer designed for use when the appearance of the door and surroundings are of first consideration. With nothing visible except the slim arms, which are styled to be as streamline and unobtrusive as possible, it achieves complete concealment without loss of power or door control. The "BRITON 500" is suitable for internal single-action doors not exceeding 7' by 3' in size, and 112 lbs. in weight.

# THE BRITON Concealed Door Closer

500

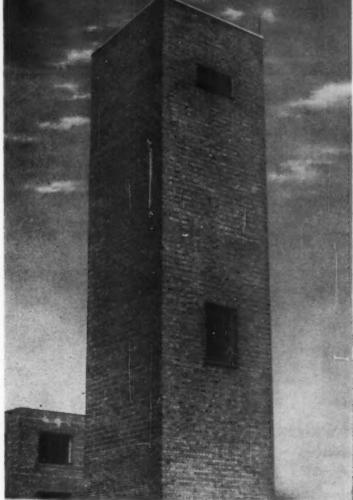


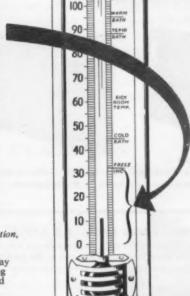
See our exhibits at the building Centre, 26 Store Street, London, W.C.1.

William Newman & Sons Ltd.

HOSPITAL STREET, BIRMINGHAM, 19.

# TOWERING A





120 110

Architect: Mr. H. C. Bishop, A.R.I.B.A., Chief Architect to the Sunderland Corporation, Contractors: Messrs. R. Mathews Ltd., 25, Villiers Street, Sunderland.

The 63-ft. high Fire Observation and Practice Tower illustrated above was erected during the winter of 1955/56 (the coldest winter for ten years.) During erection, day temperatures varied from 55 deg. F. to 19 deg. F., with bricklaying work continuing without a break. Despite the repeated cycles of freezing and thawing that occurred throughout the erection period, the Tower is today sound, the mortar in perfect condition and the brickwards absolutely impressives. That this was acceptable was due condition and the brickwork absolutely impervious. That this was possible was due to the careful supervision of the Contractors' Agent and the use of Febspeed Plus, the cement frost-proofing compound that towers above all others.

The cement Anti-Freeze Compound that also Plasticises, Waterproofs and Rapid Hardens. FROM BUILDERS' MERCHANTS-EVERYWHERE



(GREAT BRITAIN) LTD.

102 Kensington High Street, London, W.8

Phone: WES. 0444

Albany Road, Choriton-cum-Hardy, Manchester 21. Phone: CHO 1063



# **BOXES AND CLAMPS** FOR M.I.C.C. CABLE

are zinc plated.



CABLE CLAMPS

Cable clamps are suitable for single or twin-core mineral insulated copper covered cable 0.0015 to 0.003 cross-sectional area.



List No. 901 - single entry cable clamp.

entry cable clamp.

### WRITE FOR LEAFLET 257

MK have introduced a new range of boxes and

clamps for MICC cable. Single or double entry

clamps are interchangeable with any of the boxes

and are supplied separately with fixing screws and shakeproof washers. Steel boxes and cable clamps

### PLASTER-DEPTH BOXES FOR M.I.C.C. CABLE

These boxes have one clear entry and one knockout for attaching either single or double entry cable clamps.



Plaster-depth box with 2ª fixing centres.



List No. 3952 - Plaster-depth box with 43" fixing centres.

#### DEEP BOXES FOR M.I.C.C. CABLE

Deep boxes have one clear entry on one side and one knockout on each of the other three sides and one in the back to which can be attached a single or double entry cable clamp.



List No. 881 - Box to BS 1299/1363 dimensions having 2% fix-Ing centres.



List No. 882 - Box to accommodate any two gang MK accessory.

M.K. ELECTRIC LIMITED, SHRUBBERY ROAD, LONDON, N.9.

**EDMONTON 5151** 

## Architects going up in the world ...

# .. SPECIFY LUXOL

## Polyurethane Lacquer

ON ALL FLOORS

Upstairs and downstairs and everywhere there are people, Luxol Polyurethane Lacquer is the supreme floor coating that takes the hardest of wear yet keeps a continually cheerful lustre. Luxol Polyurethane Lacquer gives a beautiful glossy build that coats and protects at the same time. Feet never touch the actual floor surface because Luxol Polyurethane Lacquer shields it from wear and dirt. Instead, you get an aristocratic finish that stays lustrous for months without polishing. And its non-slip surface (ideal for dining room or dance floor) makes it safe for young and old alike; will not chip, mark or flake. Luxol Polyurethane Lacquer is a practical luxury for all suitable floor surfaces.

### AND FOR CLADDING

Luxol Polyurethane Lacquer gives a handsome protective finish to exterior cladding that withstands the severest of outdoor conditions.

Luxol Polyurethane Lacquer is a two pack product that is easily applied on site. Whether brushed or sprayed on it can be overcoated in 4-6 hours and dries to a rich deep build that neither cracks, chips nor flakes. Has exceptionally low flame spread.

For full details of Luxol Polyurethane Lacquer write for Technical Information Leaftet 11/28.



## BRITISH PAINTS LIMITED

PORTLAND ROAD, NEWCASTLE UPON TYNE, 2.



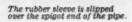
London ' Liverpool ' Aberdeen ' Belfast ' Birmingham ' Bristal ' Cardiff ' Glasgow ' Edinburgh Monchester ' Middlesbrough ' Nottingham ' Sheffield ' Southampton and all principal towns.

# FLEXAPRAIN [ ] [ ] [ ] [ ]

the Glazed Vitrified Clay Pipe with the NEW FLEXIBLE JOINT









The fointing tool drives the spigot home into the socket.

Flexadrain combines all the well tried qualities of the glazed vitrified clay pipe with the advantages of a flexible joint — providing protection against soil movement due to natural causes or to heavy pressures exerted from above.

Tests prove that without impairing the efficiency of the joint the following movements can take place:—

(a) Angular movement of  $\pm 5^{\circ}$  per joint in any direction.

(b) Axial movement — telescopic movement or "draw" of \( \frac{1}{2} \)" per joint.

Flexadrain has the full approval of the Ministry of Housing and Local Government.

#### UNIQUE ADVANTAGES

Special features include:

- Speed and ease of laying.
- No interruption in frosty or wet conditions.
- No site-concrete required.
- Automatically selfcent ring, ensuring true inverts.
- Immediate testing and back-filling.
- Lower total cost per installation.

For information write to the Engineer.

NATIONAL SALT GLAZED PIPE MANUFACTURERS' ASSOCIATION

Hanover Court, Hanover Square, LONDON, W.I.

Telephone MAYfair 0364.





The showrooms of Marlbeck Fashions, Leeds

## Well dressed walls are wearing Mural 'Vynide'

Mural 'Vynide' gives the interior designer all the advantages of conventional wall coverings plus a touch of high fashion of its own. Dressed in Mural 'Vynide' a wall can be gay or restrained, colourfully patterned or gently tinted, smooth, textured or luxuriously embossed – whatever the scheme demands. And every one of its fashionable finishes is not only impressive but stays impressive, because Mural 'Vynide' is easy to

clean and difficult to damage. It wipes clean, doesn't stain, won't scuff. In fact one of the Mural 'Vynide' range – the pure white version of the design 'Pierrot' – has demonstrated both its fashionable appearance and its practical nature by winning one of the 1960 Design Centre Awards. If you are interested in better, more fashionable, interior design, you will be won over by Mural 'Vynide', too.

Mural 'Vynide'



I.C.I. (HYDE) LIMITED . HYDE . CHESHIRE

FERODO
STAIRTREADS
KEEP IN STEP
WITH
MODERN DESIGN

Ferodo non-slip stairtreads bring to these modern stairs a clean line, maximum safety for the people who use them, and years of life without maintenance or renovation.

- \* 7 attractive colours
- \* Comprehensive range 32 treads with nosings, 3 flat treads, 2 steel-backed types
  - \* Aluminium, silver bronze or manganese bronze channels
  - \* Special orders can be manufactured

Write to our Stairtread Department for full illustrated literature for your file.

FERODO non-slip stairtreads



FERODO LIMITED · CHAPEL-EN-LE-FRITH A Member of the Turner & Newall Organisation

Decide
on linoleum,
decide on

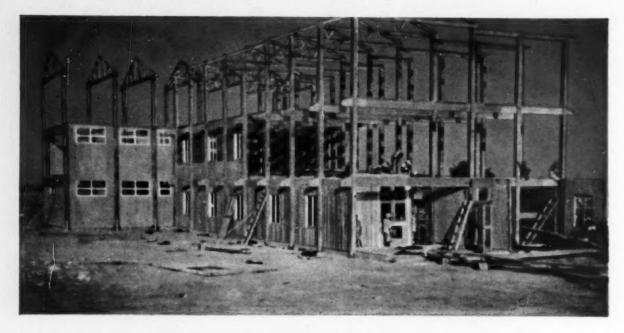
## NORTH BRITISH LINOLEUM

Patterns shown Alpine (57) & Geranium (52)

NORTH BRITISH LINOLEUM CO., LTD. CLEPINGTON GOAD, DUNDER Telephone Dundee 85288 London Officer 11-12 Foster Dane, London EC2. Telephone MONarch 1983



## **Prefabricators in Timber**



Three-storey all-timber 150 man barrack block in course of erection for Air Ministry, Aden

Simms



system for prefabricated multi-storey all-timber buildings SIMMS Timber Structures embody contemporary practice in timber engineering.

SIMMS design, manufacture and build single- and multistorey structures for all parts of the world.

Full treatment against insect attack and fire hazard.

Simms Prefabrication backed by Simms Building Service means completion to time

Further particulars from :

W. J. Simms Sons & Cooke Ltd Building and Civil Engineering Contractors

Head Office: Haydn Road, Sherwood, Nottingham ' Nottingham 66264 (10 lines)

Sales Office: British Simms Buildings Ltd, 12 York Buildings, Adelphi, London, WC2 Trafalgar 3383

BRANCHES: LONDON . BIRMINGHAM . MANCHESTER . LEEDS . ADEN . TORONTO



# IS THE HOUSE THAT JACK BUILT



Jack's house is insulated with Fibreglass.

That's what keeps it warm and comfortable all through. Fibreglass in the attic and between cavity walls stops heat escaping and keeps it inside where it belongs. Cost—a few pounds. Benefits—permanent savings in fuel and a home with extra comfort for as leng as you live in it, and if you are thinking of installing central heating, lower capital equipment costs. If you are having a house built, ask your architect or builder about the advantages of Fibreglass insulation.

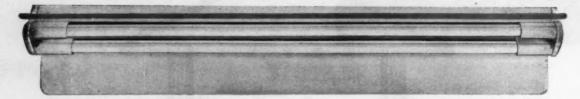
what of the house that Jim Bought? If your house is already built, you can do your own attice insulation easily enough with Cosywrap. This is a Fibreglass product available from ironmongers, stores and builders' merchants. A leaflet about it?—write and it's yours.

for comfort's sake insulate with

FIBREGLASS

FIBREGLASS LIMITED . ST. HELENS . LANCASHIRE . TELEPHONE ST. HELENS 4022

# FLUORESCENT



# FITTINGS THAT



# FIT YOUR

# BUDGET

Whether you are choosing lighting fittings for a single room or a whole building, an office block or a factory, send for the facts about our Sielect range—particularly the cost.

Briefly, the Sielect range offers you a choice of single or twin fittings, with open tubes, two kinds of reflector, or with reeded Perspex diffusers. The basic unit has been approved by the Council of Industrial Design and the range fits happily into any type or style of interior.

In addition it is offered

at an extremely attractive price. Finally, it is easy to service and clean, while the special epoxy resin finish is extremely tough and highly resistant to chemical attack. Full information about the entire series of Sielect fittings is yours for the asking in the Siemens Ediswan publication, PD11/F33. If you want help in planning or estimating for a new installation, let us know and we will send along one of our staff of experienced lighting engineers without fee or obligation.

### **Associated Electrical Industries Ltd**

Radio and Electronic Components Division
Lamps and Lighting Department

38/39 Upper Thames St., London, E.C.4. Tel: CENtral 2332



CRC 11/83



# GOMPACTOM

partitions and acoustic ceilings

#### PLANNING GUIDE

The Compactom Planning Guide contains just the sort of information you need when solving problems involving

- . DRY CONSTRUCTION DEMOUNTABLE PARTITIONS
- . COMPACTOM MINIWALL DWARF PARTITIONS
- ACOUSTIC CEILINGS AND TREATMENT
- . FITMENT WORK . TOILET CUBICLES

Ask us today for your copy

### COMPACTOM LTD

Specialists in Partitions and Acoustic Ceilings

OXGATE LANE · CRICKLEWOOD · LONDON N.W.2

GLAdstone 6633





How much
water —
hot water —
can you
afford
to waste?

In a typical washroom, an independent test showed that the consumption of water per basin could be cut by 6,000 gallons per year, of which 5,500 gallons was hot water.

This spectacular saving in water and fuel costs was achieved by fitting Unatap spray mixing taps. Write for a copy of this report, quoting number UJ. 2

## Curved Display Fitting

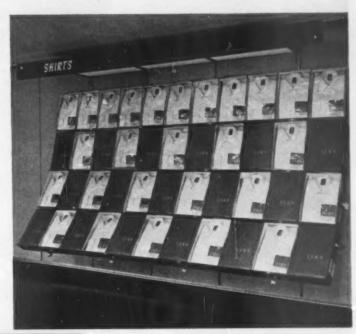
Constructed with

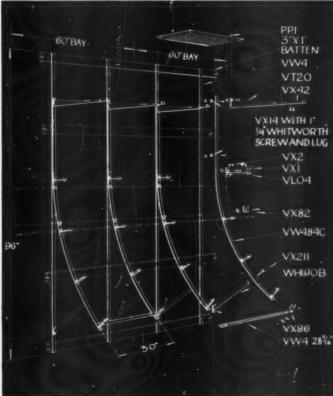
## VIZUSELL

the world-wide system of suspension

Promotes self-selection and brings all types of displayed articles into view.

JUST ONE OF THE VIZUSELL APPLICATIONS





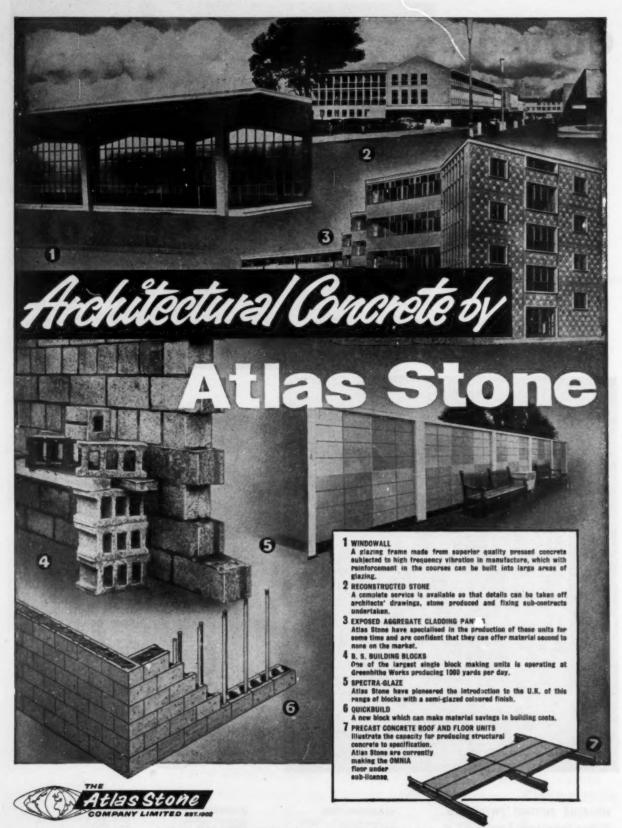
Write for details to:

VERSATILE FITTINGS (WHS) LTD. 10 New Fetter Lane, London, E.C.4 FLEET STREET 3581. MANCHESTER
33 BLACKFRIARS STREET,
MANCHESTER.
Phone: Deansgate 2564.

YOU ONLY NEED
A SCREWDRIVER
TO PUT THIS
LOT TOGETHER!

BRISTOL HERBERT HOUSE, TEMPLE GATE, BRISTOL I Phone: Bristol 28215.

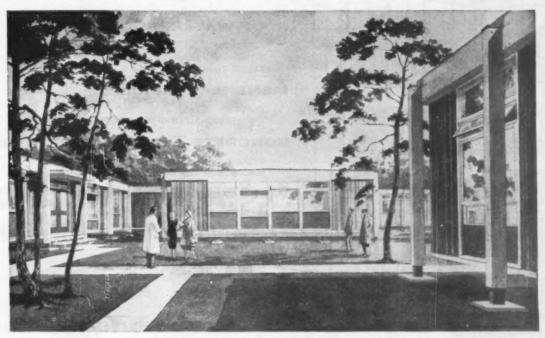
GRAHAM & WYLIE LTD., MILL STREET, BRIDGETON, GLASGOW. Phone: Bridgeton 4831



Artillery House, Artillery Row, London, S.W.i. Tel.: ABBey 3081-2-3-4. Grams.: Atlastonco, Sowest London Wark at: GREENHITHE . STROOD . MELDRETH . CAMBRIDGE . SHORNE . RYE (SUSSEX) . GREAT YARMOUTH

# SERIES 330

a brilliant new addition to the Swiftplan range of 'ready-made' buildings



Series 330 represents the greatest advance in factorymade buildings both in appearance and flexibility. Architect-designed, Series 330 has an absolutely new modern look, quite unlike that usually associated with prefabricated buildings.

Flexibility is far greater, and includes spans and heights as well as panelling! Doors, windows and solid walls can be placed exactly as required, both externally and internally.

Series 330 will be of special interest to County and Borough Councils for use as schools, canteens and clinics, to architects, and to industry and commerce for use as offices. Series 330 may well be the perfect answer to your accommodation problem.



39 VICTORIA STREET : LONDON : S.W.1 : TELEPHONE: ABREV 4393

WORKS: GREENFORD . MIDDLESEX . TELEPHONE: WAXIOW 6221

# BUILT-IN PROTECTION

## at all points

... with the greatest range of
protective building materials
available in the British Isles.
Full technical information is yours on request.

### ROOF WATERPROOFING

BITUPROOF Liquid
BITUPROOF Allweather Brushing Grade
PLYCOL Plastics

### MEMBRANE D.P.C.s

VENTROT LIQUAPRUF—BITUMEN/RUBBER EMULSION

### CONCRETE & MORTAR ADDITIVES

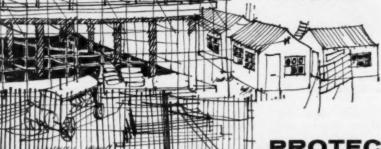
KYLJACK for rapid hardening and frost protection. PLYCOMOR for easy working mortars and improved adhesien.

### WALL WATERPROOFING

CELUCID Silicone Waterproofing Solution.

#### **FLOORING**

Adhesives for all laid-on coverings Surface seals and coatings Hard-wearing surfaces for industrial floors Levelling compounds





the Plycol way!

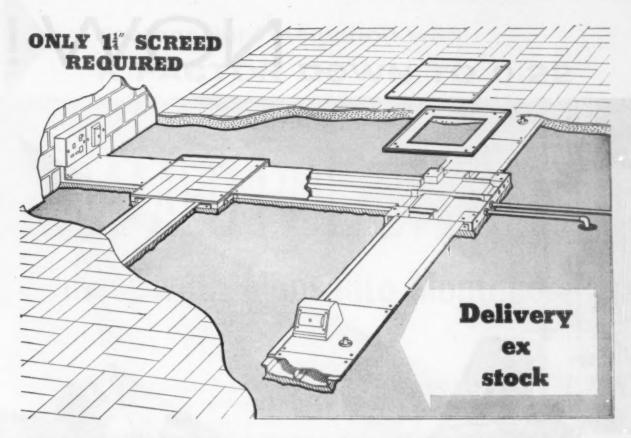
write for literature

## BRITISH BITUMEN EMULSIONS LTD

DUNDEE ROAD • TRADING ESTATE • SLOUGH • BUCKS • TEL: SLOUGH 21261/6

DEESIDE • SALTNEY • NR. CHESTER • TEL: CHESTER 23128

91A LOWER ASHLEY ROAD • BRISTOL 2 • TEL: BRISTOL 51380



# GREENWOOD AIRVAC INTRODUCE A STANDARDISED FLOOR DUCT SYSTEM FLUSHFYT

## for telephone and all electrical services

The new Greenwood Airvac "Flushfyt" Floor Duct System provides a distribution system for all telephone and electrical services. With a small number of standardised units you can achieve the greatest possible flexibility in layout. For ease of installation the new G.A. "Flushfyt" System cannot be bettered.

- ★ Duct covers can be supplied fitted with 1¼" diameter outlets or may be added at any future date.
- ★ Adjustable floor frame to accept final floor finish.
- ★ All services in one duct. Central division to segregate telephone from electrical services.
- ★ Skirting Terminal Boxes and Universal Pedestal Units for floor connection.

Write for full details and new "FLUSHFYT" leaflet today!



# Greenwood Airvac Conduits Ltd (

Patentees, Designers and Manufacturers of Electrical Conduit Systems

CARLISLE HOUSE, 8 SOUTHAMPTON ROW, LONDON, W.C.I. CHAncery 9377 (3 lines) 'Grams: Aircon, Westcent, London

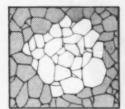
# NOV!





# FOAMED POLYSTYRENE

# made with Monsanto Montopore



## Thousands of tiny air cells keep K value down to 0.22

This simple illustration explains the remarkable effectiveness of foamed polystyrene as an insulation material: thousands of air pockets retard heat penetration.



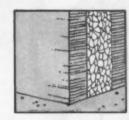
## Versatile! Ideal for roof, wall and floor insulation

Foamed polystyrene can be readily faced with wood, hardboard, etc., to make doors and partition units with first-class insulation properties. Used in floors it also adds 'step-sound' insulation.



#### Rock-bottom installation costs

Foamed polystyrene is amazingly light, and rigid. Handling on site is simple, fixing is quick and straightforward—either mechanically or with adhesives. Foamed polystyrene can be cut, sawn or drilled with ordinary woodworking tools. Quick, trouble-free handling that cuts on-site costs.



#### Pre-cast wall units too!

Foamed polystyrene, made into sandwich constructions with concrete, produces excellent thermally-insulated curtain wall units. Foamed polystyrene does not absorb water, is dimensionally stable, unaffected by vibration and rot-proof.

Foamed polystyrene is a low-cost material available in many sizes and thicknesses. For more information and the name and address of your nearest supplier, write to Monsanto—the makers of Montopore, the raw material for foamed polystyrene.

Montopore is a Registered Trade Mark



#### MONSANTO CHEMICALS LIMITED

861 Monsanto House, Victoria Street, London, S.W.1, and at Royal Exchange, Manchester, 2

In association with: Monsanto Chemical Company, St. Louis, U.S.A. Monsanto Canada Limitad, Montreal.

Monsanto Chemicals (Australia) Limitad, Melbourne. Monsanto Chemicals of India Private Ltd., Bombay.

Representatives in the world's principal cities.

# Here's a Bouquet for a Floor Quarry..

# because

Floor Quarries are economical . . . to buy AND to lay ... they're resistant to acids, alkalis and grease. They're virtually indestructible . . . the inherited skills of a traditional craft go into the making of a Floor Quarry—the name for a rectangle of natural clay hardened in fire. Floor Quarries, being dustless, are easily cleaned and maintained and come in a variety of sizes, thicknesses and attractive colour shades. Advice and information is obtainable from Builder's Merchants, Tiling Contractors or direct from the Floor Quarry Association.

THE FLOOR QUARRY ASSOCIATION

FEDERATION HOUSE

STOKE-ON-TRENT STAFFORDSHIRE



Maximum legibility and good taste are combined in the Gents wall clocks shown here.

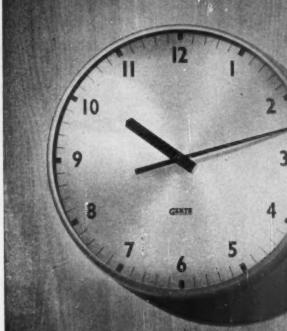
Styled by a leading industrial designer they provide a choice of standard models which fit happily into present-day surroundings and décor.

These and others in the extensive Gents range have been selected by the Council of Industrial Design for inclusion in Design Index.

All are available for operating either on A.C. Mains or as part of a Master Clock System.



In every way... Right!



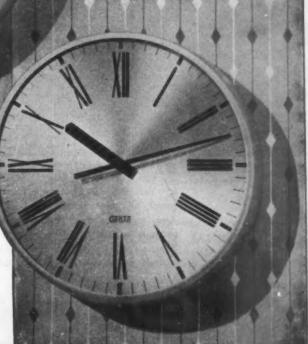
May we send you literature?

# GENTS

## **ELECTRIC CLOCKS**

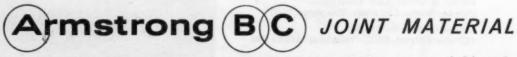
GENT & COMPANY LIMITED, Faraday Works, Leicester. Telephone: 36151 London Office & Showroom: 47, Victoria Street, S.W.1. Telephone: ABRey 6888

Also al: BIRMINGHAM. BRISTOL. EDINBURGH. GLASGOW. NEWCASTLE. BELFAST





... springs back, recovers ... Whatever your word, Armstrong B.C. Joint Material does it. Very little extrusion under pressure, high recovery characteristic, resistance to weather, petrol, oil, solvents, acids and alkalis – these are just some of the advantages of this Armstrong joint filler. The resilience of natural cork, resin-bonded and impregnated with bituminous material, gives this joint filler a recovery characteristic of up to 90%. It is light, easy to cut, and forms a bond with the concrete. Supplementary uses include screed underlayment and anti-vibration pads for machinery. Please write for full details.



ARMSTRONG CORK COMPANY LIMITED, INDUSTRIAL DIVISION, KINGSBURY, LONDON, N.W.9. COLINDAIC 7080

# For utmost efficiency in Thermal Insulation and Sound Reduction



...PURPOSE-MADE IN FINEST TIMBERS TO ARCHITECT'S SIZE, STYLE AND FINISH

#### BUILDING RESEARCH

#### STATION TESTS

When a standard-production TOMO WINDOW WALL-Unit (8 ft. × 8 ft.) was tested at the Building Research Station, Garston, the mean thermal transmittance of the complete unit was found to be 0.31 B.Th.U.l.g., fth/F. This is equal to the thermal transmittance of a traditional 11-in. cavity brick wall This impressive result was further improved to 0.29 when the TOMO Pleated Blinds, fitted between the panes, were lowered.

The Uscalus of the students.

panes, were lowered.

The U-value of the window-area only was found to be 0.38: with TOMO pleated blinds down, it became 0.35. At 0.38, TOMO double-plazed WINDOWS are substantially (29%) better than the U-value of 0.47 quoted for conventional double windows in the I.H.V.E. Guide to Current Practice, 1955.

\*\*\*\*\*\*

The excellent thermal-afficiency achievement of TOMO double-glazing (amply demonstrated in the report of recent B.R.S. Tests, quoted on left) is one of many good reasons why architects specify these superbusindows.

Another is the ever-increasing need for maximum sound reduction. In this respect TOMO WINDOWS afford a reduction in sound level of approximately 40—50 decibels.

The marked success of TOMO double-glazed WINDOWS is due to the fact that two panes of glass are carried in separate sashes which, in turn, are coupled together in such a manner that air filtration can take place between the panes. This time-honoured method of coupling, which is used extensively throughout Scandinavia, not only prevents condensation forming between the panes but allows the sashes to be opened for the purpose of cleaning the insides of the two panes and for gaining access to TOMO pleated blinds that can be housed between them.

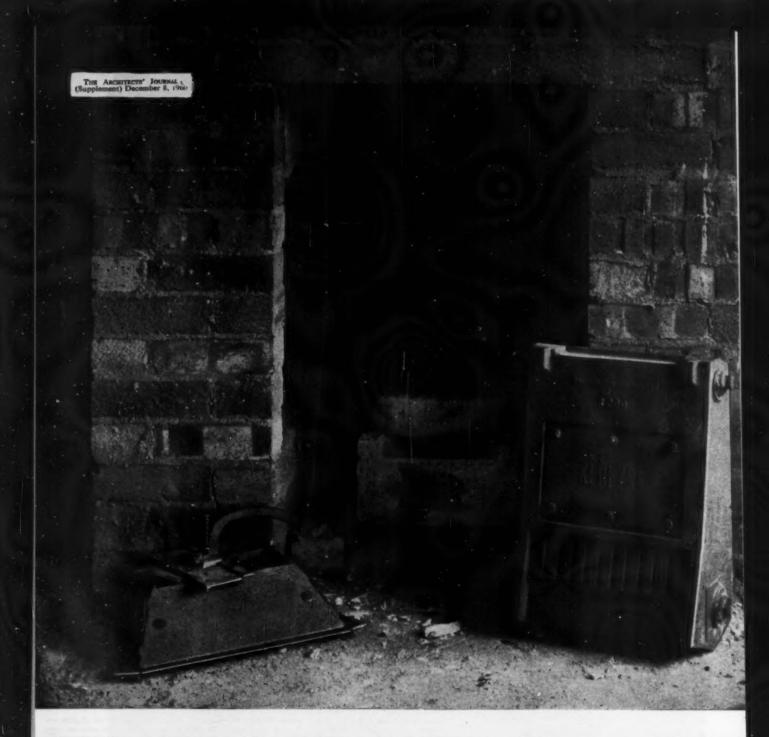
TOMO double-glazed WINDOWS also offer the advantages of finely-controlled ventilation, and total indoor window-cleaning. They are suitable for inward or outward opening and can be top-hung, bottom-hung, side-hung or pivot-hung.

Full information forwarded on request:

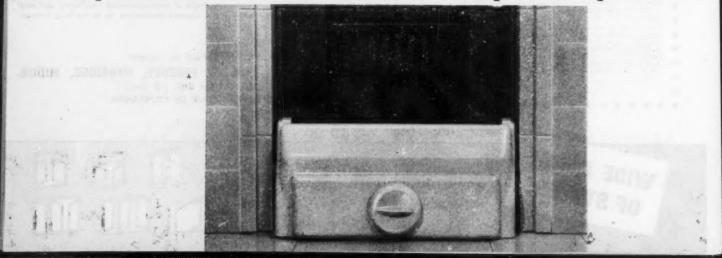
TOMO TRADING CO. LTD., COWLEY PEACHEY, UXBRIDGE, MIDDX.

Telephone: West Drayton 3751 (10 lines)
ONE OF THE TOMO GROUP OF COMPANIES

WIDE RANGE OF STYLES!



A Redfyre Bacboiler adds value to every house you build





Specify Redfyre, and you specify all the charm and comfort of a beautiful open fire . . . you specify the convenience of cheap hot water for kitchen and bathroom . . . and you specify the extra bonus of partial central heating. Yet for all this, Redfyre is inexpensive and easy to install; running costs are very very reasonable; and maintenance costs virtually non-existent.

There are now three Redfyres with Bacboilers for you to choose from—all well-known to the public. The Hearth Redfyre with underfloor airfeed and the famous low-cost Redfyres, the 55 and 60. All these models are controlled burning fires, are Ministry-approved and are suitable for use in smokeless zones.

May we send you full details of these fires in our specially-bound Architect's Handbook?

NEWTON CHAMBERS & CO LTD, REDFYRE PRODUCTS, THORNCLIFFE, SHEFFIELD





# Alufloor

UNITED AFRICA HOUSE, BLACKFRIARS, LONDON, E.C.4
Archivect Kenneth Wakeford, Jerram & Harris Main Contractors John Laing & Son Ltd.

As new buildings spring up all over Britain the demand for ALUFLOOR increases. In a year more than a quarter of a million square yards of Alufloor have been laid. UNITED AFRICA HOUSE, Blackfriars, is the latest new building to have ALUFLOOR laid throughout. Supplied in 18" panels in any wood to Architect's specification. Each panel consists of 80 die-squared hardwood fingers mounted on a perforated aluminium foil backing.

Write for illustrated brochure to: Sole Manufacturers for the United Kingdom



A few of the recent contracts in which Alufloor was laid.

The Bowater Building.

Messrs. Humphreys, Knightsbridge.

Monsanto Chemicals Ltd., Newport & Fawley.

The British Museum.

Union Castle Mail Steamship Co. Ltd., Bond Street, W.1.

Messrs. Jones & Higgins, Peckham.

The Burleigh Suite, Strand Palace Hotels Ltd.

Hawker Aircraft Co. Ltd., Kingston.

British Transport Commission, Marylebone.

Central Electric Generating Board, Bournville, Birmingham.

Wimpey Housing Developements.

CALDERS (SOUTHERN) LTD Plough Way, Bermondsey, London, S.E.16 Telephone BERmondsey 3535 CALDERS (NORTHERN) LTD Biddick Lane, Washington, Co. Durham Telephone Washington 2321

Members of the Calder Group of Companies

AP 54

this child is being POISONED

In buildings without filtration or where filtration systems are inefficient, germ laden air still poisons our children. In factories, adults too are subjected to deadly poisons through air pollution.

Where Far-Air Filtration has replaced conventional systems, 99.5% filtration efficiency has been obtained. Far-Air filters have a much longer life than conventional systems and annual costs are considerably reduced.

### INTERMIT LIMITED

Far-Air Licensed Manufacturers for Europe BRADFORD STREET - BIRMINGHAM 5



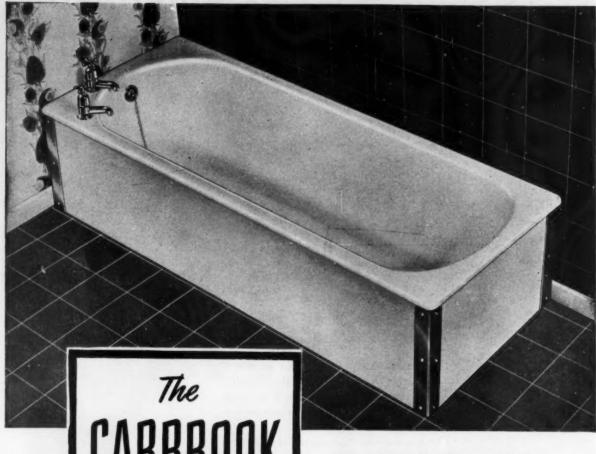
The illustration shows a standard panel filter and an H.P. After Filter—full details in Barbour Index File 28.



BIRPIELD GROUP



# CARRON QUALITY FOR THE SMALLER BATHROOM



CARRON CARRON

Now Carron make a flat bottom bath specially designed for installation in bathrooms of limited size. Corner tap positions are available to facilitate plumbing, and the overall width is limited to 26½" and to lengths of 54", 60" or 66". The Carbrook is moderately priced and finished in the full range of Carron colours, or in white porcelain enamel. Write today for detailed specification sheet.



CARRON COMPANY · CARRON · FALKIRK · STIRLINGSHIRE LONDON OFFICE: 15 UPPER THAMES STREET, E.C.4. CENtral 7581 (4 lines) and at 22-26 Redcross Street, Liverpool, 1. 125 Buchanan Street, Glasgow, C.I. 33 Bath Lane, Newcastle Upon Tyne



#### -Gypsum Plasterboard

#### Hot tempo

Rome wasn't built in a day yet twenty-four hours almost sufficed to destroy her. The crackle of fast-spreading fire, sweet music to the ears of Nero, told of swift and terrible destruction and ultimately it is rumoured, hastened the departure of the arch-incendiarist himself. Now as then, rapid spread of fire remains one of its deadliest aspects - that is why Plasterboard, with its incombustible gypsum core, has proved of such tremendous value in modern building. Plasterboard not only possesses Class 1 surfaces (B.S.476) both sides, without requiring additional flame retardant treatment, but further recommends itself by strength, ease of handling, and a cost in the region of only 4d. a square foot!

#### Write for

free brochure giving facts and diagrams concerning fire resistance and thermal insulation

THE GYPSUM PLASTERBOARD DEVELOPMENT ASSOCIATION G.P.O. BOX 321, LONDON NW1

Of all the approved insulating materials

INSULATING PLASTERBOARD

is the cheapest by far -giving the essential Class 1 fire protection and thermal insulation. Its cost has in fact reverted to 1951 level.

New types, new designs The new extended range of "Insulight"\*
Hollow (Bass Blocks provides all the elements for an unlimited variety of design patterns—this "Boomerang" type is only one example—while retaining all the functional advantages. For full details of the complete new range write to the Technical Sales and Service Department.

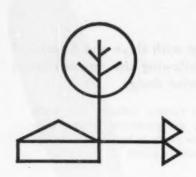
#### PILKINGTON BROTHERS LIMITED

St. Helens, Lancashire London Office: Selwyn House,
Cleveland Row, St. James's, S.W.1. Supplies are
available through the usual trade channels.

LIGHT AND PRIVACY

with Pilkingtons' Insulight' hollow glass blocks







1

#### TIMBER STRUCTURES

Timber structures minimise maintenance cost, have a high resistance to collapse in case of fire, keep foundation costs down, provide simplicity of fixings for following trades, and are aesthetically satisfying on completion without further treatment.

1. H.B. Beams up to 100 ft. span. Portals up to 150 ft. span. North lights and cantilevers. Overhead suspension cranes can be included.

2. Boxed Plywood and Stressed Skin Panels. Beams up to 40 ft. span. Portals up to 60 ft. span.

3. Connectored Frameworks. Trussed girders up to 120 ft. span. T.D.A. industrial and domestic trusses. Towers up to 80 ft. high.

4. Glulam. Beams up to 60 ft. span. Portals up to 80 ft. span. Arches up to 120 ft. span, and other specialities.



Enquiries are welcomed





#### BEVES & CO. (STRUCTURES) LTD.

Head Office: Kingston Wharf, Shoreham-by-Sea, Sussex Telephone: Southwick 2285

London Office: 110 Cannon St., London, E.C.4 Telephone: Mincing Lane 9161 Members of the BEVES GROUP of companies—

BEVES & CO (STRUCTURES) LTD
BEVES & CO (LONDON) LTD
BEVES & CO (FLOORS) LTD
BEVES & CO (JOINERY) LTD
BEVES & CO LTD., Timber Importers

CV3-41

New types, new designs The new extended range of "Insulight".

Hollow Glass Blocks provides all the elements for an unlimited variety of design patterns—this "Boomerang" type is only one example—while retaining all the functional advantages. For full details of the complete new range write to the Technical Sales and Service Department.

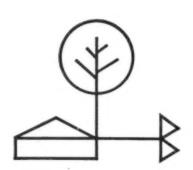
#### PILKINGTON BROTHERS LIMITED

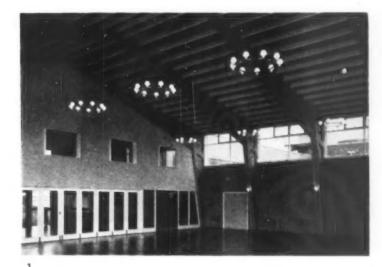
St. Helens, Lancashire London Office: Selwyn House,
Cleveland Row, St. James's, S.W.1. Supplies are
available through the usual trade channels.



LIGHT AND PRIVACY







\_



Enquiries are welcomed

#### TIMBER STRUCTURES

Timber structures minimise maintenance cost, have a high resistance to collapse in case of fire, keep foundation costs down, provide simplicity of fixings for following trades, and are aesthetically satisfying on completion without further treatment.

- H.B. Beams up to 100 ft. span. Portals up to 150 ft. span. North lights and cantilevers. Overhead suspension cranes can be included.
- 2. Boxed Plywood and Stressed Skin Panels. Beams up to 40 ft. span. Portals up to 60 ft. span.
- 3. Connectored Frameworks. Trussed girders up to 120 ft. span. T.D.A. industrial and domestic trusses. Towers up to 80 ft. high.
- 4. Glulam. Beams up to 60 ft. span. Portals up to 80 ft. span. Arches up to 120 ft. span, and other specialities.



#### BEVES & CO. (STRUCTURES) LTD.

Head Office: Kingston Wharf, Shoreham-by-Sea, Sussex Telephone: Southwick 2285

London Office: 110 Cannon St., London, E.C.4 Telephone: Mincing Lane 9161 Members of the BEVES GROUP of companies-

BEVES & CO (STRUCTURES) LTD
BEVES & CO (LONDON) LTD
BEVES & CO (FLOORS) LTD
BEVES & CO (JOINERY) LTD
BEVES & CO LTD., Timber Importers

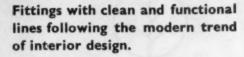
CV5-41

#### THE COUNTY RANGE OF FLUORESCENT FITTINGS



Surrey

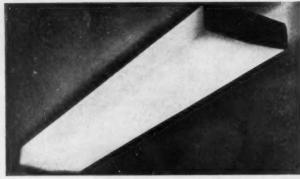
They are designed as diffusing fittings and not based on an industrial back spine, consequently the lamps and reflectors can be arranged to give maximum efficiency with a wide and shallow diffuser.



Opal Perspex diffusers with black ends and practically invisible back spines result in high quality fittings reasonably priced.



Essex



Sussex

Only the best materials are used in the production of the fittings including heavy gauge steel, Perspex diffusers and reliable control gear.

\* APPROVED BY THE COUNCIL OF INDUSTRIAL DESIGN FOR INCLUSION IN THE DESIGN INDEX

Ease of maintenance has been an important consideration in the design of these fittings, the diffusers tilting off from either side for cleaning and lamp replacement. Access to control gear is from below.



Kent

COMPLETE INFORMATION ON THESE WELL-DESIGNED FITTINGS IS READILY AVAILABLE ON REQUEST



#### Harris & Sheldon ELECTRICAL Ltd

STAFFORD ST BIRMINGHAM CENtral 6272 - 46 GT. MARLBOROUGH ST LONDON WI GERTARD 0869

THE HARRIS AND SHELDON GROUP OF COMPANIES . SHOPFITTING . INTERIOR DECORATION . DISPLAY



'PUDLO'

cement waterproofing

HAUNCHWOOD

# HAUNCHWOOD

HAUNCHWOOD " HAUNCHWOOD

HAUNCHWOOD
FOR BRICKS AND TILES

Architects, Builders and Engineers in ever increasing numbers are naming HAUNCHWOOD clay products for quality and economy. For all kinds of bricks, tiles, ridges, chimney pots, hollow blocks, floors and walls, enquiries invited — standards or specials.



'BY HAUNCHWOOD'

of course!

HAUNCHWOOD BRICK & TILE CO. LTD., STOCKINGFORD, NUNEATON

Telephone: Nuneaton 3419: In association with G. W. Lewis' Tileries Ltd.



DIFFICULTIES CAN BE OVERCOME. It's all a question of know-how. For instance, many prominent Architects and Engineers confronted with a sticky structural problem simply call in the RCDG. The Reinforced Concrete Design Group either gives them the necessary data (free) or does the donkey calculations and sees the problem through (modest cost). Your difficulties end when you reach for the 'phone — DIAL ABBey 7766

#### REINFORCED CONCRETE DESIGN GROUP

The Reinforced Concrete Design Group is an independent professional team created by Expanded Metal as part of their service to the building industry.

THE EXPANDED METAL CO. LTD., 16 CANTON STREET, LONDON, S.W.1. TELEPHONE-ABBey 7766



# PAXBOARD







Newalls (Reg'd Brand) PAXBOARD presents the architect with a first-class medium for large-area acoustic insulation.

The modern tendency to use large rooms in office blocks results in an artificially increased noise level due to numbers of people working together, and makes acoustic treatment more essential than it would otherwise be. Similarly in factories, the provision of a sound-absorbent ceiling which reduces noise, and simultaneously insulates heat more effectively than any building board, is an attractive proposition, particularly in view of the reasonable cost for an all-asbestos product.

PAXBOARD has been produced especially for this class of work.

It is  $\frac{1}{2}$ " in thickness and available in sizes up to 6' 0"  $\times$  3' 0", has a very good efficiency (50% absorption coefficient at 500 c.p.s. — 75% at 2,000 c.p.s.), is not affected by repeated decoration and, being composed entirely of asbestos, is absolutely *fire-proof* and is rot-proof and vermin-proof.

PAXBOARD weighs less than 1-lb./sq. ft. and the larger than normal acoustic board size renders erection cheaper and more convenient.

With all these practical attributes it is small wonder that PAXBOARD is firmly established as the architect's first choice for large-area acoustic insulation.

Full technical information available on request.

# Newalls PAXBOARD

NEWALLS INSULATION CO. LTD.

Head Office: WASHINGTON, CO. DURHAM

A member of the Turner & Newall Organisation

Offices & Depots at: LONDON, GLASGOW, MANCHESTER, NEWCASTLE UPON TYNE, BIRMINGHAM, BELFAST, BRISTOL and CARDIFF

Agents and vendors in most markets abroad



Although you know more or less what goes into a glass of beer, it does not follow that you would be a successful brewer. Every industry has specialised knowledge, usually unsuspected by those who know it only by its end product. Brewery floors for instance should be resistant to acids, dustless, hardwearing, jointless and therefore easily hosed down. LITHOCRETE—Limmer & Trinidad's Industrial Mastic Asphalt Flooring does, of course meet the requirements of all who need heavy duty floors but, more than that, it can be given the additional special qualities required to overcome the hazards of particular industrial operations. Descriptive leaflets on request.

THE LIMMER & TRINIDAD LAKE ASPHALT CO. LTD.
Trinidad Lake House, 232/242, Vauxhall Bridge Road, London, S.W.1.
Telephone: TATe Gallery 4388.

THE TRINIDAD LAKE ASPHALT CO. (NORTH WESTERN) LTD. India Buildings, Water Street, Liverpool 2. Central 8591.

THE WESTERN TRINIDAD LAKE ASPHALT CO. LTD. Asphalt House, St. Mary Street, Cardiff. Cardiff 24781.

MEMBERS OF THE

LIMMER & TRINIDAD GROUP OF COMPANIES

#### WHAT MAKES THIS CLASSROOM SO LIGHT?



#### Corrugated 'Perspex' lantern lights

The architects have achieved ideal lighting conditions in the classrooms of this modern school. They have installed Opal Corrugated 'Perspex' lantern lights in the roof. Teachers and pupils enjoy the advantage of working in well-lit classrooms.

Lantern lights in Opal Corrugated 'Perspex' acrylic sheet

transmit an evenly diffused working light. They are tough, light, easy and economical to install. Once in, they save money on artificial light and last indefinitely. They are unaffected by the severest weather conditions, and withstand the corrosive atmospheres of most industrial areas.

When diffused daylight is needed to ensure good working conditions, always use Opal Corrugated 'Perspex'. It is available in a wide range of profiles to fit most corrugated roofing materials.

For good roof-lighting-specify

CORRUGATED PERSPEX

Perspex' is the registered trade mark for the acrylic sheet manufactured by I.C.I.



Curved Opal Corrugated 'Perspex' lantern lights installed in the roof of Hadrian County Secondary Modern School built for Wallsend Education

Committee.
Architects—Messrs. Reavell & Cahill, F/F.R.I.B.A. Ainw.ck
Gen. Contractors—Messrs. Alex Anderson (Contractors) Ltd. Newcastle-



MPERIAL CHEMICAL INDUSTRIES LIMITED LONDON S.W.1



# Leaderflush

#### BRITAIN'S FINEST FLUSH DOOR

Architects and Builders
are requested to send
for quotations and
also to make use of
our advisory service

There is a quality in LEADERFLUSH Flush Doors which is unmistakable. It is a quality which is not only apparent on the surface but which goes right through. LEADERFLUSH Flush Doors are made for long, lasting service, always stable always good to look at. Site finishing is reduced to a minimum (doors specified for varnish, lacquer or polish are 'VELVET-SEAL'ed, only one coat of finishing agent is then required). Maintenance costs are non-existant. The quality is right, the price is right.

LEADERFLUSH (Doors) LTD, TROWELL, NOTTINGHAM. Telephone: likeston 4111 (6 lines)

LONDON OFFICE: BUSH HOUSE, ALDWYCH, LONDON W.C.2. Tel: COVent Garden 2243.



# NO MAINTENANCE FOR YEARS IN THE WETTEST CLIMATE IN ENGLAND

The Alston Foundry Company Limited, of Cumberland, say: "The \*bridge is perpetually exposed to the elements,

the action of which has had absolutely no effect whatever on the installation . . . there have been no appreciable signs

of wear and it has never been necessary to carry out any form of maintenance to the bridge walkway in the period under review."



• They were referring to a bridge which, since its installation, has carried tens of thousands of people, in heavy industrial footwear, in the worst weather in England. An ALAFLOR installation, of course !
The illustration shows the ALAFLOR bridge after 6 years.

#### EXTRUDED ALUMINIUM FLOORING AND TREADS

ARCHIBALD LOW & SONS LIMITED

KIRKINTILLOCH SCOTLAND . HOME & OVERSEAS SALES OFFICE 143 SLOANE STREET LONDON S.W.1. TEL: SLOANE 6178



# Shires'continental'seat

As a replacement or a new fitment, no other toilet seat in this price range has the advantages offered by Shires 'Continental'.

#### THE SEAT

Light, shapely, slim—but virtually unbreakable. Unique bufferless construction is allowed by the supreme strength of the exclusive black material used.

#### THE COVER

Stylish, elegant, beautifully designed. Completely overlaps the seat for extra hygiene. Available in colours to tone with any bathroom scheme: green, primrose, red, turquoise, deep blue, blue, ivory, pink, white and black.

#### FITTING

Adjustable hinges mean the assembly can be fitted to leading makes of pan without the use of tools.

SHIRES ARE THE LARGEST MANUFACTURERS OF MOULDED FLUSHING CISTERNS IN THE WORLD

They also make the Uni-Lynx close-coupled suite.

Full details and trade terms from Division Se, SHIRES & CO. LONDON) LIMITED, GUISELEY, YORKS.
Lalso as LONDON. BIRMINGHAM & GLASGOW); Shires (Ireland) Limited, Dublin



Colouring floorwarming cable elements indicative of their rating is one of those brilliantly simple ideas that make life so simple for the architect, for the heating engineer, for the contractor, for the builder, for the buyer, for the store man, for the chap who has to lay it.

Say you want to use a 2kW element for an installation — that's the blue element — the plan is keyed in blue, and the element drawn from store or delivered by your Simplex branch is blue. There can be no mistake—the coloured cable element is laid according to the indicated colour on the plan. Ordering the cable, too, is as easy as habit for any of the 7 listed ratings:

BLU/2 catalogue number simply means Blue 2 kW.

PNK/75 catalogue number simply means Pink 750 W.

It's as rational as Simplex. And from Simplex you can rely on a complete service—conduit fittings, switchgear, automatic control gear, and cable elements made by Mersey Cables, an associated company; with the advantages of speedy delivery from the branch which is near you. The Simplex booklet FW 2194 is a mine of information on floorwarming.

for floorwarming schemes this new Simplex colour system is what you need



48

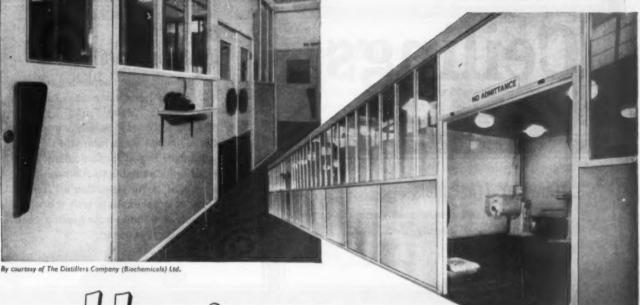
Branches throughout Britain and Agents throughout the World.

Blue Arabesque Hornitex corridor panelling with Ivory panels above.



#### HEW PANEL FIXING SYSTEM

"Klipiton" fixing strips in aluminium or plastic enable Hornitex panels to be simply pressed home under spring clips. "Klipiton" allows complete removal or instant interchange of panels.



Hygiene In Industry

Weighing room celling and walls panelled with White and Ivory Hornitex.

Hornitex melamine surfaced hardboard was used for the wall and corridor panelling and ceilings shown above at The Distillers Company (Biochemicals) Ltd. Laboratory at Speke, Liverpool.

Hygienic, economical and immensely durable, Hornitex stands up to impact and abrasion and will not warp, crack or craze. It wipes clean with a damp cloth and is highly resistant to boiling water, steam, oil, alcohol, mild acid and alkali. Hornitex provides the highest quality at the lowest cost in the country and it is the only melamine surfaced hardboard that is completely odourless.

Available from stock in over 40 radiant colours and patterns including superb wood imitations, completely new mosaics and pastel shades. Send now for detailed literature, samples and patterns.

Hornitex

Technical advisory service at your disposal.

Permanent Display at the Building Centre.

HORNITEX (Plastics) LTD.

37/38 FENCHURCH ST., LONDON, E.C.S. TELEPHONE: MANSION HOUSE 6599

# Bowater module Ceilings

#### **Bowater T/A Panels**

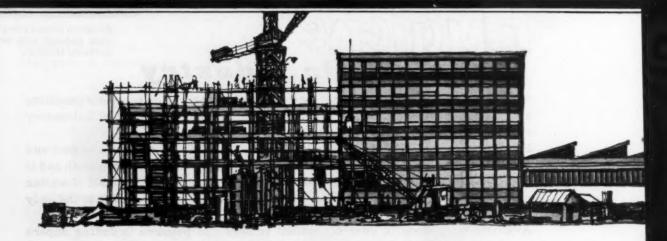
High thermal and acoustic efficiency. Easily fixed and already decorated. Size: 2' x 2' x 1".

#### Bowater Metal T/A Panels

Very efficient in keeping noise down and warmth in—and completely incombustible. (Sound absorption coefficient of 0.9—in the vitally important middle range.) Size: 20" x 20" x 1".

#### Bowater Insulation Board

For roof lining and suspended ceilings. High thermal efficiency. Easy to install with Bowater Metal Fixing Systems. Size: 2' x 2' x ½" or ¾" panels or in sheets. Available with flame retardant or Witelite finish. If you're particularly interested in Industrial Insulation—write for a copy of "The Heat Barrier", which deals comprehensively with the whole subject, and shows how heating costs can be greatly reduced.



# Bowater Dry Construction Panels

For the most economical decorative ceiling, with an excellent thermal insulation performance. Leathergrain finish. Fixed by nailing to battens. Size:  $2' \times 2' \times \frac{7}{4}''$ .

#### Read all about Bowater Ceilings

a comprehensive booklet on acoustics and Bowater Acoustic products. Write for a copy now.



#### Bowater Acoustic Panels

Insulation board perforated to  $\frac{1}{2}$ " depth, giving good acoustic qualities. Easy to fix—they can even be stuck in place. Size:  $2' \times 2' \times \frac{3}{4}$ ".

#### The Bowater Ceiling Service

The range of Bowater products, designed to meet a wide variety of needs and prices, is backed by comprehensive service from a nationwide network of distributors and fixing contractors. They are ready with advice and technical assistance, including drawing-board work and acoustic and thermal analyses. This service is at your disposal from the moment you answer this advertisement, right up to when the building's handed over.

Write to: BUILDING PRODUCTS DIVISION, BOWATERS SALES COMPANY LIMITED, BOWATER HOUSE, KNIGHTSBRIDGE, S.W.1. Telephone: KNIghtsbridge 7070 Also at: Bowaters Irish Wallboard Mills Ltd., Athy, Co. Kildare, Ireland. Tel: Athy 80



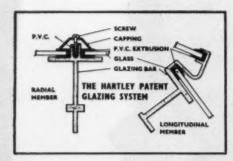


2/2 ft. long × 43 ft. wide × 25ft. high

# The Glasshouse range

#### covers all needs

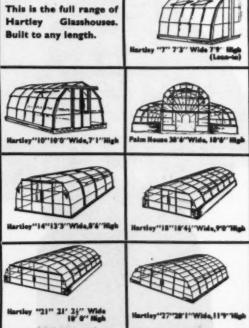
The Hartley range of glasshouses has been designed to meet the requirements of Parks, Research Establishments, Horticulturalists, Nurserymen and Private Gardeners, and include these outstanding features :-



Ahminium alloy construction; new shape with new glasing system to admit far more light; absence of internal supports for unrestricted working space; virtual elimination of breakages—each pane is enclosed on all edges by P.V.C. extrusion and aluminium frame, and so safeguarded against shock, draughts and weather, and against breakages caused by expansion and contraction; stove enamelled structure preventing unsightly surface corrosson.

Pull details of the Hartley Range are available on request to

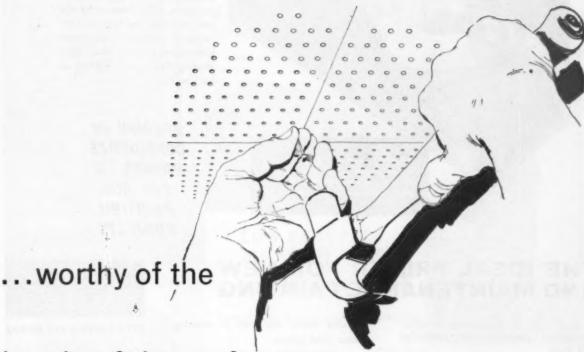
V. & N. HARTLEY LIMITED GREENFIELD, NR. OLDHAM, LANCASHIRE Telephone: Saddleworth 444



#### ACOUSTIC GYPROC

... combines acoustic control with

#### adequate fire-protection



#### hands of the craftsman

#### GYPROC products include:

GYPROC WALLBOARD-LATH-PLANK

GYPROC PLASTERS

GYPSTELE ROOF AND WALL LININGS - SUSPENDED CEILINGS

PLAXSTELE SUSPENDED CEILINGS

GYPUNIT PANELS

GYPTONE ACOUSTIC TILES

GYPLITE READY-MIXED LIGHTWEIGHT AGGREGATE PLASTERS

GYPKLITH WOOD WOOL SLABS

Free technical literature will be sent on request

#### GYPROC PRODUCTS LIMITED

Head Office: Singlewell Road, Gravesend, Kent. Gravesend 4251/4 · Glasgow: Gyproc Wharf, Shieldhall, Glasgow, S.W.1. Govan 2441/3 Midlands: 11 Musters Road, West Bridgford, Nottingham. Nottingham 82101 - London: Ferguson House, 15/17 Marylebone Road, N.W.1. Hunter 4031/4 AG.6



Considerable research has gone into the development of this new primer. Primer 'X' is a dual purpose primer containing special anti-corrosive pigments and a cationic agent which gives tenacious adhesion to all building materials and ferrous and non-ferrous metals. It is unimpaired by atmospheric dampness and presence of moisture. The firmness of the key provided by Primer 'X' compels moisture to seek alternative outlets, thus preventing flaking and peeling of paintwork.

> SPECIFY IN CONFIDENCE PRIMER 'X' FOR ALL PAINTING PROJECTS

### THE IDEAL PRIMER FOR NEW AND MAINTENANCE PAINTING

★ PRIMER 'X' has proved its effectiveness and durability under controlled field tests.

\* The ideal Primer for all maintenance work.

★ Saves money and time in ensuring against paint failure.

★ Invaluable for Housing Scheme Work, Schools, Public Buildings, etc.



STOPS flaking and peeling



STOPS paintwork blistering

SUPPLIED IN PINK AND GREY . APPLY BY BRUSH

Write for further particulars and prices to:-

# montgomerie, stobo

Deeside, Saltney, Nr. Chester. 136/154, Stranmillis Road, Belfast. 52/72, Rogart Street, Glasgow, S.E. Telephone Chester 23128 (3 lines). Telegrams 'Turpentine' Chester.
Telephone Belfast 667978 Telegrams 'Turpentine' Belfast.
Telephone Bridgeton 1005/6/7 Telegrams 'Turpentine' Glasgow.
Also at Slough.

# SULZER air Conditioning MULTI-STOREY

#### SULZER HIGH VELOCITY AIR CONDITIONING

Installed in a 21 storey office block

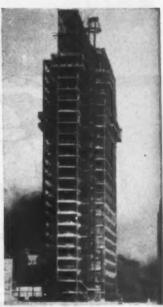
MAXIMUM HEAT LOAD 19,800,000 B.T.U./hr. MAXIMUM COOLING LOAD 9,200,000 B.T.U./hr



#### LOW VELOCITY AIR CONDITIONING

MAXIMUM HEAT LOAD 32,000,000 B.T.U./hr. MAXIMUM COOLING LOAD 9,600,000 B.T.U./hr.

Installed in a 25 storey office block



#### SULZER HIGH VELOCITY DUAL DUCTAIR CONDITIONING

Installed in an 18 storey office block



MAXIMUM HEAT LOAD 6,160,000 B.T.U. HR. MAXIMUM COOLING LOAD 2,500,000 B.T.U. HR.

Write for literature

SULZER BROS. (LONDON) LTD. 12 Dyott Street London W.C.I.

# The fully automatic oil-fired boiler for the smaller house

# SMITHS

#### "MODEL 30"

This excellently designed boiler (at the very moderate retail price of £75) brings fully automatic background heating and domestic hot water within reach of the small-home owner. It has a high thermal efficiency, is economical to run, needs servicing only once a year, and (where it will aid economy) can be controlled by a time-switch.

Extensively tested before being put on the market, this boiler has given most satisfactory service in homes all over the country.

#### SUMMARY OF TECHNICAL DATA

The natural-draught vaporizing burner is fitted with electric ignition, and operates high-fire and off. 200-250 volts AC only.

Nominal output is 30,000 B.Th.U/hr, feeding radiators totalling 160 sq. ft surface area, or 110 sq. ft radiators combined with hot-water supply.

Recommended cylinder capacity 25 to 40 gallons.

Measurements:  $56\frac{3}{8}$  high x  $20\frac{3}{4}$  wide x  $18\frac{1}{4}$  deep.

Weight: 93 lbs.

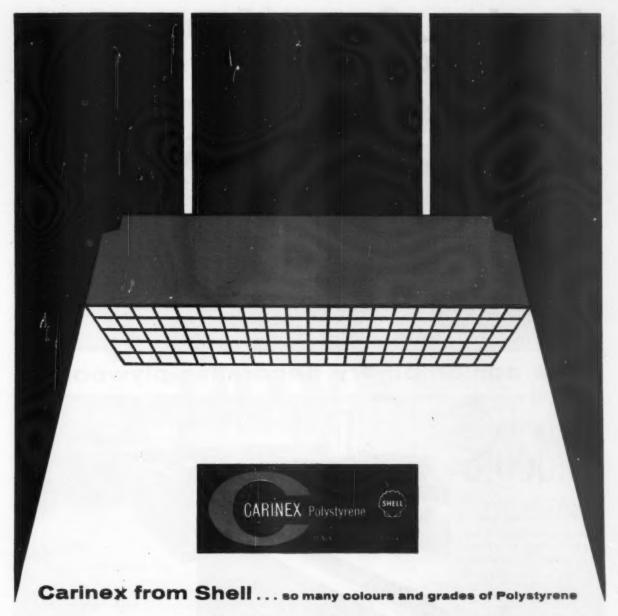
Flue draught required: .06 w.g. Fuel: regular grade kerosene.

1. Flow Control Valve 2. Vaporizing Pot Burner

3. Draught Stabilizer 4. Water Temperature Thermostat 5. Igniter 6. On/Off Switch 7. Baffle

8. Heat Exchanger

Enquiries to: S. SMITH & SONS (ENGLAND) LIMITED. WITNEY, OXON. Telephone: WITNEY 678



The Shell range of Carinex polystyrene offers you colours in the widest variety.

These include such special effects as pearlescent, metallic, fluorescent and tinsel, in addition to the normal 'transparents' and 'opaques'.

There are grades tailor-made for the manufacture of modern light fittings and electrical equipment—grades that range from light stabilised

CARINEX GP for lighting louvres to CARINEX HR for capacitors.

Light in weight and low in cost, CARINEX polystyrene adds colour and quality to electrical products and flexibility and economy to your future planning.

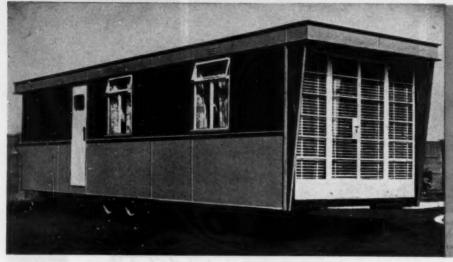


Further details may be obtained from Shell Chemical Company Limited, 170, Piccadilly, London, W.1. Regional Offices at London, Birmingham, Manchester, Glasgow, Beffast and Dublin. Overseas enquiries should be directed to your Shell Company (or to Shell International Chemical Company Limited, St. Swithin's House, St. Swithin's Lane, London, E.C.4.) 'SHFLL' and 'CARINEX' are registered Trade Marks

Shell Plastics mean brighter prospects

-

# the beauty of Plydek



# outdoors

Plydek cladding on the "Housemaster" mobile home, built by Fairholm Products Ltd. This firm says: "Plydek is a great attraction and we are very pleased with it."

the contemporary decorative plywood



There is more than mere good looks behind the success of Plydek. Developed over five years ago for the toughest outdoor application imaginable, boat decking, the rugged strength of Plydek is due to modern gluing techniques to Weather-and Boil-proof standard. Now the beauty and proven weather stability of Plydek, in Makore or Teak, are being applied in hundreds of new ways—outdoors

and indoors. External wall cladding, dados, counter fronts, window soles, panelling, display stands, shop fronts, reception desks, furniture, and caravan flooring, fittings and panelling—all are getting the contemporary Plydek look. The standard size is 8' long by 4' wide, the strips running lengthwise. Standard thicknesses in Makore are 5, 6 and 9 mm, in Teak 6 mm. Other thicknesses to order.



Write for list to:

stockists throughout the country

THAMES PLYWOOD MANUFACTURERS LIMITED, HARTS LANE, BARKING, ESSEX. TELEPHONE: RIPPLEWAY 5511 (9 LIMES)

More comprehensive . . . More informative . . .

The NEW enlarged, fully comprehensive 1960 Prestex Catalogue covering an even wider range of top quality, low price joints and fittings.

It's free, send for your copy NOW



To: Peglers	Limited.	Prestex	House,	Marshalsea	Road,	London	SE1
Please ser	nd a fre	е сору	of you	r 1960 Pres	tex Ca	talogu	e to

NAME

Grestex

#### **COMPRESSION JOINTS**

LIGHT GAUGE COPPER TUBES (88 659 1955) UNDERGROUND COPPER TUBES (83 1386/1947)

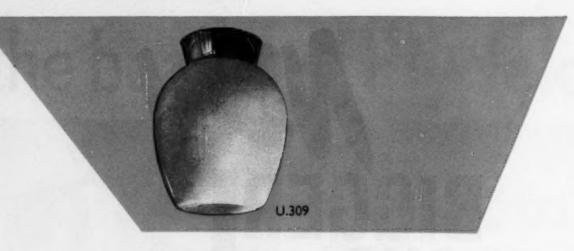
PLASTIC TUBES (851972/1955)

1960 EDITION



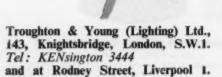
#### PEGLERS LTD - BELMONT WORKS - DONCA STER

Also at 28 Thorp Street, Birmingham, 5 PRESTEX HOUSE MARSHALSEA BOAD LOND: | 681



## Step by Step

With appearance, installation and maintenance so carefully considered at the design stage, there is a triple trust in Troughton & Young's fine fittings.



fine lighting fittings



#### WEATHERFOIL for the Architect

Many of the most eminent architects in the country entrust their heating problems to Wéatherfoil. They know they can rely on the Weatherfoil design team for the closest co-operation at every stage of the project. Result—a heating system perfectly suited to its purpose at the lowest possible cost.

### Metered Heat | for Multiple Housing

Tenant pays a standing charge included in the rent, which covers capital costs and maintenance, and a measure of background heat. Charge for full heating is registered by a meter, and may be as low as 1d per hour. Heater thermostat is set by tenant and can be switched off when not required.



- Low cost installation
- Economical running
- Temperature and on/off control in each dwelling
- Tenant pays by meter



Write for details to:-

WEATHERFOIL LTD. Head Office: 185 BATH ROAD, SLOUGH - BUCKINGHAMSHIRE - TELEPHONE: SLOUGH 25561

BROADGATE HOUSE - COVENTRY - WARWICKSHIRE - TELEPHONE: COVENTRY - 40116

#### WHATEVER YOUR BUSINESS .







Planned lighting is more attractive, easier on the eyes, and far superior when it comes to any form of display. For the most effective planned lighting, simply get in

touch with Philips Lighting Design Service. This famous service offers you the advice of a team of expert lighting engineers and of a fully qualified architect, and can provide you with individual recommendations on the exact lighting for any purpose.

Set the wheels in motion now: post the attached coupon to Philips.



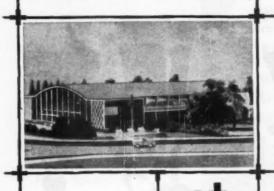
lease send me full details of your

LIGHTING DESIGN SERVICE

Philips Electrical Ltd., Lamp and Lighting Group Century House, Shaftesbury Avenue, London, W.C.2

LIGHTING DESIGN

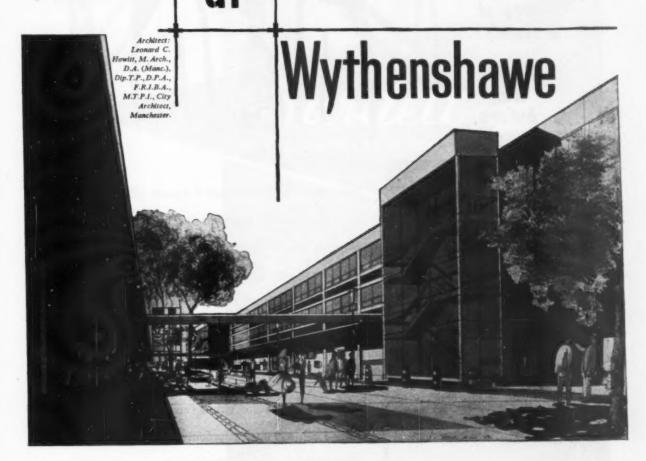
# More work



Main contractors for the ultra-modern swimming pool illustrated on the left-scheduled for completion before the end of 1960-Simon-Carves are now busy on a further stage in the improvement of civic amenities at Wythenshawe.

We have been entrusted with the design and construction of the reinforced concrete frame of flats and shops for the first phase of the new Civic Centre. The large illustration shows the eventual appearance of this attractive centre, which, like the swimming pool, has been designed by Mr. L. C. Howitt, Manchester's City Architect.

Our civil engineering contracting service is at work on many projects which are helping to give a new face to Britain's towns and cities. Current contracts include offices, schools, colleges and other public buildings, as well as railway modification schemes, mining installations and a wide variety of industrial plants.



BUILDING AND CIVIL ENGINEERING BY

Simon-Carves Ltd

CHEADLE HEATH, STOCKPORT

and at CALCUTTA · JOHANNESBURG · SYDNEY · TORONTO SC 238

### The atmosphere was getting heated

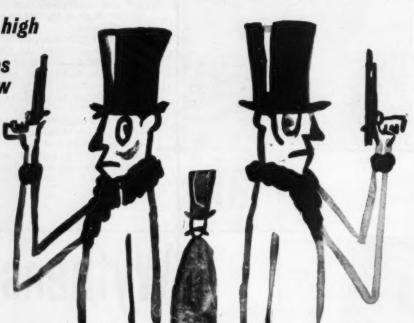
tempers ran high

temperatures ran low

heating costs were phenomenal

production
was at
a standstill

all this was before



#### Grecon

"Grecon" incorporates

- \* EFFICIENCY \* SIMPLICITY
- ★ VERSATILITY ★ and ECONOMY in ONE METAL FIXING SYSTEM

#### MARLEYcel

İs

- \* Extremely light and easy to fix
- Rot proof and immune to organic deterioration
- \* Extremely high in thermal insulation
- \* Resistant to water and water vapour

But with a Grecon inverted T System ceiling ALL the heat you generate keeps the factory warm instead of escaping into the atmosphere.

The Grecon System, combined with the Marleycel Polystyrene insulation board, gives a lightweight ceiling that won't sag, and is installed quickly and easily.

Results are immediately apparent—heating thermostats are lowered more than 10° to give the same held temperature. The most efficient and modern way to save on fuel bills and increase productivity is to fit a Grecon-Marleycel insulated ceiling.

If you would like to know more about the Grecon System, write to:

GRECON SYSTEMS LTD 29/30 St. James Street, London S.W.1 |Tel.: TRA 1454

40 MS 4144

#### **ESTABLISHED 1832**

Designers and

Manufacturers

of bigb class

Cooking and

Food Service

Equipment

Maylands Avenue, Hemel Hempstead BOXMOOR 4242

Bell Street, London, N.W.1 PADDINGTON 8222

12, Whitmore Road, Birmingham, 10 VICTORIA 1615 530, Stretford Road,

TRAFFORD PARK 0288-9

Manchester, 16

Bartlett

Contractors to:

Admiralty

Ministry of Supply

Ministry of Works

British Broadcasting Corporation

Imperial Chemical Industries

Metropolitan Vickers Electrical Co. Ltd.

Steel Company of Wales Ltd.

etc., etc., and Overseas

CAFETERIA SERVICE COUNTER

OFFICES IN SCOTLAND, SOUTHAMPTON, SOUTH WALES 5.8.120

# MORRIS FOR IROKO and AFRORMOSIA

These two African hardwoods are no longer newcomers: you see them everywhere in joinery of all sorts, often superseding traditional timbers.

Very stable, durable and pleasing to the eye, both are available in a wide range of lengths and widths, uniformly graded, free of sap and knots, and far below the price of Teak and joinery Oak.

We always hold large stocks of air seasoned sizes from 1" to 4", and ready kiln dried up to 2". Economical selection for users' cutting sizes is part of our service.



Rayensdale Wharf, Stamford Hill, London, N.16. Tel: STAMFORD HILL 6611

reliable hardwoods:

MAHOGANY, TEAK IROKO, AFRORMOSIA





### WALPAMUR PAINTS

#### do a wonderful job

Beautiful colours . . . lasting perfection of finish . . . for inside and outside use . . . Walpamur Quality Paints do a wonderful job. Constant laboratory testing at every stage of manufacture ensures the consistently high quality on which is based the international reputation of these famous paints.

**DURADIO 5-YEAR ENAMEL PAINT** is unsurpassed for interior and exterior decoration.

WALPAMUR WATER PAINT is ideal for walls and ceilings: a special Exterior Quality is also available.

**DARWEN SATIN FINISH** for inside use only is attractive in any room and perfect for use in humid atmospheres.



For further details of these and other Walpamur products write to The Walpamur Co. Ltd., Darwen, Lancs.

THE WALPAMUR CO LTD · DARWEN & LONDON

Paints, Enamels and Varnishes for every possible need

# BRITISH SOLID FUEL

is the CHEAPEST way to heat!

Now you can plan
efficient economical
and smoke-free
boiler-firing
by specifying

# BIGWOOD

COAL, ANTHRACITE AND COKE STOKERS
AND CHIMNEY FILTERS

#### REPRESENTATIVES

- NORTH-EAST. B. Peace, 54 Benomiey Crescent, Almondbury, Huddersfield. (Telephone: Huddersfield 2035)
- NORTH-WEST. G. P. Hoult, 295 Chester Road, Manchester 15.
  (Telephone: BLAckfriars 9206)
  WEST MIDLANDS. S. Dickinson, Joshus Buswood & Son Limited.
- WEST MIDLANDS. S. Dickinson, Joshus Bigwood & Son Limited, Head Office, Wolverhampton.
- EAST MIDLANDS. W. T. Rimer, South View, 2 Boundary Road, Newark, Notts. LONDON. H. C. Williams, 75 Ebury Street, London, S.W.1. (Telephone: \$LOane 6/85/6)
- SOUTH-WEST. H. L. Boorne, 'The Ridge', North Road, Bath. (Telephone: Both 2545)
- SOUTH WALES. H. Seager, 55 Kimberley Road, Penylan, Cardiff. (Telephone: Cardiff 46646)
- SCOTLAND. I. E. Stewart, 70 Shakespeare Street, Glasgow, N.W. (Telephone: Maryhill 4722)
- IRELAND. P. J. Casey, 38 The Rise, Mount Merrion, County Dublin. (Telephone: Dublin 882587)

JOSHUA BIGWOOD AND SON LIMITED Head Office: WEDNESFIELD ROAD · WOLVERHAMPTON · Tel: 24771

SK112



## on the right lines...

BRITISH RAILWAYS
CHOOSE ANDERSON
STEEL "D" DECKING

Roofing at the Longsight Electrification

Depot, completed recently for British

Railways as part of their modernisation scheme, was Anderson Steel "D" Decking — a strong galvanised steel deck insulated and covered with a durable weatherproofing.





Contractors: Charles R. Price Laminated timber: Kingston (Architectural Craftsmen) Limited

## D. ANDERSON & SON LIMITED

STRETFORD MANCHESTER TELEPHONE: LONGFORD 4444
OLD FORD LONDON E 3 TELEPHONE: AMHERST 9381

THE ARCHITECTO' TOURNEY (Cupalement) December 9, 1960

# SPUR



## system for shelving

#### SIMPLICITY

Spur shelving system can be erected easily without skilled labour.

#### ADAPTABILITY

The position of Spur shelf brackets can be easily and rapidly changed as layout and shelving requirements alter. The shelf brackets are simply moved to other slots.

#### ATTRACTIVE

Spur shelving looks good and is made in attractive colours.

#### STRENGTH

Spur is scientifically built for the job and will take heavy loads.

#### ECONOMY

Spur saves erection costs and enables maximum use to be made of space. SPUR to new ideas. Spur to better shelving. Spur to progress in design through this most modern and versatile shelving system!

Have you considered Spur? It is full of new possibilities for the architect—not only for shelving but for many other problems of support such as tables, desks and counter tops.

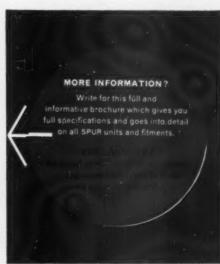
#### How SPUR shelving works

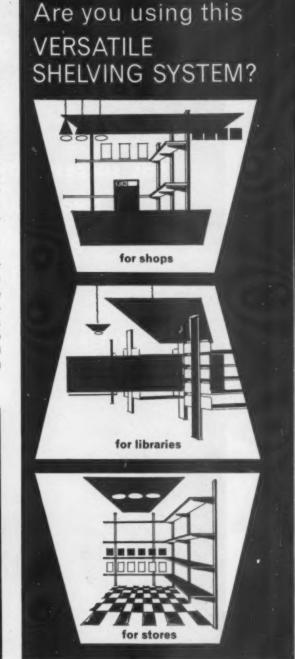
Spur relies on simple, detachable cantilever brackets. These are clipped into slotted 14 gauge steel uprights of U-Channel section. When shelving requirements alter — the brackets are simply moved to new positions—hence the countless applications for Spur in shops, stores, warehouses, libraries, laboratories, workshops and the home.

#### How SPUR helps design

As a feature of design alone—apart from their functional aspect—Spur units add a new and striking touch to any interior. Apart from the standard wall uprights, Spur double-sided uprights are made—ideal for room sub-division. Special Spur fitments are available for the most specialised shelving requirements, and brackets are made in standard and sloping types and in a range of sizes.







SPUR a basic tool for the architect

a BURGESS SULZER heated ceiling

has successfully withstood

a two hour fire test at 1000 C

providing adequate protection to

supporting steel beams above

TEST F.R.O.S.L. No. 1090 CONDUCTED TO B.S. 476 1953

ACCUSTICS BY BURGESS PRODUCTS CO. LTD. ACOUSTICAL DIVISION, HINCKLEY, LEICS.

HEATING BY SULZER BROS: (LONDON) LTD. 12 DYOTT ST. LONDON W.C.1.

THE ARCHITECTS' JOURNAL (Supplement) December 8, 1960



VENTURA

## logic

The Ventura series by Merchant Adventurers Limited provides architects and engineers with a range of twenty lighting fittings designed with logical simplicity to fulfil a variety of common lighting needs. They give general lighting with a high degree of diffusion and with no disturbing glare. Moulded in white opal translucent plastic, the diffuser has an open top for shadowless ceiling lighting. The open louvred aperture gives virtually uninterrupted downward lighting while shielding the bare lamp from all normal viewpoints.

Prices from 19/2d. including P.T.





MA

A comprehensive leaflet giving full data and prices is available on request.

### **Merchant Adventurers Limited**

Head Office: Hampton Road West, Feltham, Middlesex. FELtham 3686 London Showrooms: 43, Portland Road, London, W.17 PARk 1223

73

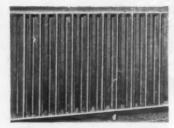
THE ARCHITECTS' JOURNAL (Supplement) December 8, 1960

## The rich gold



## trim is-Noral aluminium!





Details of three of the many Noral aluminium sections throughout the building. Left: the decorative frieze along the top. Centre: the corner section showing the caps and soffitt plates on the beams that span the pillars. Right: a section of the decorative fencing.

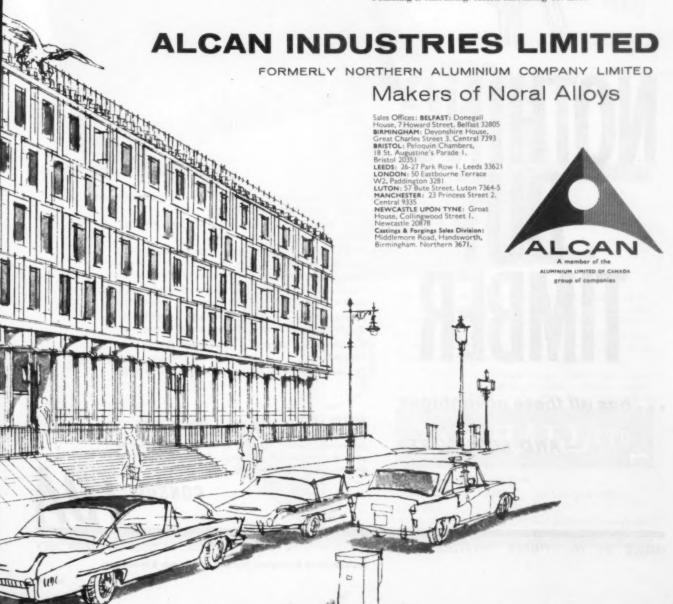
The rich gold trim that adds a final touch of distinction to the new United States Embassy is of aluminium—Noral aluminium, of which 40 tons are used throughout the building.

To achieve the desired effect, all extruded sections were specially designed, and finished by polishing and anodising to ensure lasting good looks.

For the showpiece, or for the workaday application, you can safely rely on Alcan Industries' experience and manufacturing skill. If you have a problem that aluminium might solve, we should like to discuss it with you.

UNITED STATES EMBASSY, GROSVENOR SQUARE, LONDON WI.

Architect: Eero Saarinen & Associates Associate Architects: Yorke, Rosenberg & Mardall Main Contractor: Pauling & Co. Ltd. Fabrication & Installation: Frederick Sage & Co. Ltd. Finishing & Anodising: Acorn Anodising Co. Ltd.





- giving uninterrupted floor areas.
- · Light weight and ease of erection of timber roofing further reduce construction costs.
- New ideas and structural forms—shell roofs, glued laminated beams, plywood girders, bow-string trusses— extend the applications of timber as a roofing material.
- Timber is today readily available for all needs, and lends itself to prefabrication, thereby speeding construction.
- · Research and development have made it possible to design timber roofs of almost any shape or span.
- · Timber roofing has good durability and proven fire endurance.
- · No painting or other maintenance costs are incurred.

. has all these advantages

- AND LOW COST!

WRITE NOW for a free copy of 'Design in timber'—a TDA-produced brochure illustrating modern uses of timber for roofing, framing, cladding in many new and exciting structural forms. And for specific data on any aspect of designing or building in timber.

CONSULT

ISSUED BY THE TIMBER DEVELOPMENT ASSOCIATION LIMITED . 21 COLLEGE HILL . LONDON

and branches at Birmingham, Bristol, Glasgow, Leeds & Manchester





APSSI





Vintry House, Queen Street Place, London, E.C.4. Telephone: CENtral 3040

THE ARCHITECTS' JOURNAL (Supplement) December 8, 1960



## For yours and the Captain's table

A lovely ship sets sail. From bow to stern, a shipbuilder's dream come true. And for more than two thousand passengers, a three-week life of luxury. Everything superlatively right, down to the last pepper pot. Which reminds us: the tableware is designed by Robert Welch,

and made by J. & J. Wiggin. No difficulty about a name for it: Oriana. Beautiful to look at, each satin-finished, stainless steel piece. Practical. Modern. It needed to be, and it is: Oriana for Oriana. Oriana for you. Oriana for the Captain's table. For a host of land-locked tables in hotels and restaurants: anywhere, in fact, that caters for the customer whose appreciative eye doesn't only scan the menu...



Old Hall BLOXWICH, STAFFS.



## INDUSTRIAL ENGINEERING LTD

## The roof specialists

As specialists for over forty years in the construction, reconstruction, maintenance and waterproofing of industrial roofs, we are able to offer the architect a complete service designed to relieve him of every worry.

- The complete roofing contract can be placed with us, eliminating the need for dealing with several sub-contractors.
- A number of highly specialised technical departments are always at your disposal for consultation and advice.
- Complete surveys can be carried out and estimates submitted without cost or obligation.

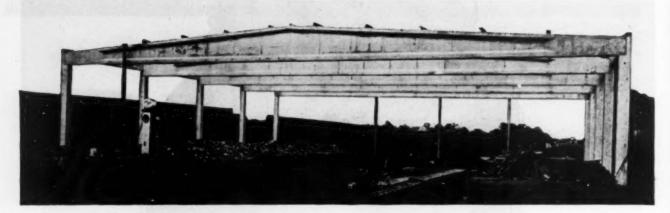
#### Branch offices throughout the country.

INDUSTRIAL ENGINEERING LIMITED, VOGUE HOUSE, HANOVER SQUARE, LONDON W.1. HYDE PARK 1411 (7 LINES)

## THE NEW



## LONG SPAN BEAM



### FOR SPANS UP TO 70 FT-ROOF PITCH 4°

Longer spans by special arrangement

This new pre-stressed concrete long span beam has the great advantages of a low pitch angle and great strength. Precon offer the complete service of foundations, frame and roofing (normal and insulated). Attractive precast concrete eaves gutters are also available.

This new beam is offered at an exceedingly competitive price.

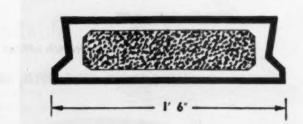
For Precon Reliability and solid value for money also specify:

#### PRECON PORTAL FRAMES

in spans from 15' to 50'

#### PRECON FLOORS

(Erection Service available by special arrangement) the floor with the built-in heat and sound insulation at no extra cost.





St. Albans Market, City Engineer, A. S. Moody, A.M.Inst.C.E., M.I.Mun.E., A.M.T.P.I.

Precon Limited, Harbour Road, Rye, Sussex, Telephone: RYE 3003



Mutac Clipper switches have been accepted by the Council of Industrial Design for Design Index—so architects, consulting engineers and contractors are choosing them for their good looks, as well as for their functional efficiency and easy assembly.

# fust a minute!

that's all it takes to instal the

## MUTAC

### ARCHITRAVE SWITCH ASSEMBLY



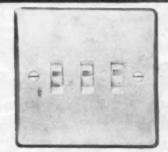
Take either a 'Mutac Clipper' plaster depth or architrave switch plate and select the required switch, bell push or pilot light. Simply press home the spring clip with a small screwdriver and a fixed plate assembly is ready for installation. Available in 1, 2 or 3 gang for plaster depth and 1 and 2 gang for

architrave.
'Mutac Clipper'
switch assemblies
will cut installation costs and



save time as additions and alterations can be made with the minimum of effort.

#### PLASTER DEPTH SWITCH ASSEMBLY

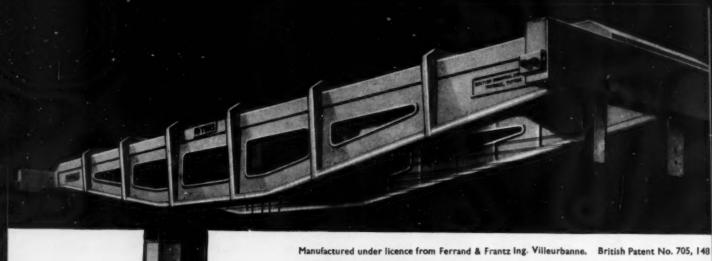


S. E.C.

INSTALLATION EQUIPMENT GROUP

THE CENTRAL EXPERSE OR LTD., MAGNET BOUSE, KINGSWAY, LONDON, W.C.S.

SWITCH AND FUSE GEAR
H.R.C. FUSES
OVERHEAD BUSBARS
RISING MAINS
CONDUIT
PIRELLI GENERAL CABLE
CABLE TRUNKING
UNDER-FLOOR CABLE DUCTS
ELECTRIC WIRING ACCESSORIES
BELLS



## **MODERN FACTORIES NEED**

# RÉEL ABOVE ALL ELSE

## TO SAVE SPACE AND GIVE INCREASED HEIGHT OF LIFT

-with reduced building costs!



The underslung crab unit allows a highest hook position approaching close to the building height.



The driver's cage, glazed or open, is arranged to give maximum possible visibility in all directions.

Réel is the only modern overhead crane specially created to meet modern industrial demands for higher mobility and efficiency. The unique Réel design carries the crane to within inches of the roof, giving maximum height for lifting. Enclosed girder construction combines lightness with great strength, allowing more economical running and maintenance. There are capacities to suit all requirements. Handling of goods is faster, safer and more economical with Réel—why not contact us now for full information.

# THE BRITISH

overhead travelling crane

## BRITISH INDUSTRIAL

CORONATION WORKS . HAINGE ROAD . TIVIDALE . TIPTON . STAFFS

Telephone: TIPTON 1222/3/4



.. new and wider scope for the designer...

FINELINE



Wherever veneers are used the revolutionary 'Fineline' veneer presents perfection and greater opportunities to create furniture or panelling of matchless beauty.

## JOHN WRIGHT & SONS (VENEERS) LTD

AVON WHARF LONGFELLOW ROAD MILE END ROAD LONDON E3

Tel: Advance 4444 (10 lines) Grams: 'Mottled Bochurch London'

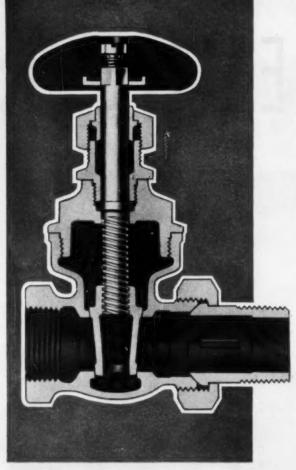
## New improved design



## Gun-Metal RADIATOR GATE VALVES

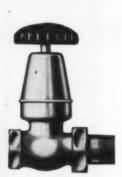
This new series of valves, designed for service up to 150 lbs. sq. in. and 250°F. combine several improved design features with well known characteristics of Hattersley valves. Notable details are: unobstructed flow area when fully open; solid wedge and correctly pitched acme thread for easy and positive operation; composition hand wheel with deeply recessed centre screw; cast gun-metal body and tailpiece; standard, semi-easyclean and full easyclean designs. Full and semi-easyclean patterns can be supplied in chromium plated finish.

Please write for literature covering the new range of Hattersley fullway and angle radiator valves and unions.





Valve with polished shield, semi-easyclean pattern.



Full-easyclean pattern with polished shield and body.

HATTERSLE



the name for good valves

HATTERSLEY (ORMSKIRK) LIMITED ORMSKIRK · LANCASHIRE and at HALIFAX and LONDON



## speeds construction at Courtaulds Preston factory

The brickwork lining for Courtaulds new chemical effluent channel was bonded with Furane Resin cement. Until set, this cement is incompatible with water, and to wait until the newly laid concrete shell was completely dry would have held up work for weeks.

KEEPING WATER OUT Oppanol BA Plastic Sheeting was the ready made answer to this problem. A layer of this waterproof, rotproof material between brickwork and concrete provided a tough, impervious barrier... enabled the bricklayers to work close behind the concrete mixers.

KEEPING CHEMICALS IN The new channel has to carry a heavy flow of chemical effluent for more than half a mile. Non-corrodible, non-ageing Oppanol BA ensures it will do this safely, permanently.

OPPANOL PLASTIC SHEETING—gives lasting protection against acids, alkalis, water, corrosion of all kinds in floors, foundations, walls, bridges, tunnels and conduits.

Please write for full information to

#### F. A. HUGHES & CO LIMITED

4 STANHOPE GATE LONDON W1 HYDE PARK 6000

photographs
by kind permission of
Courtaulds Limited
Specialist Laying Contractors,
Semtex Limited,
Industrial Div.,
Salford 3



WATERPROOF PAPER

## IN BUILDING AND CONSTRUCTION

For concrete underlays, curing overlays, or other temporary purposes: IBECO No. 40 to BSS 1521/1949 Class B.

For structural concrete or covering screeds: maco No. 60 or 80 depending on the stresses involved.

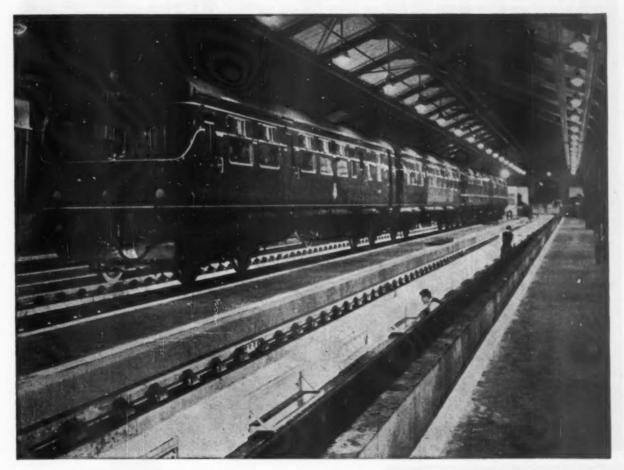
For preventing draughts and penetration of moisture in walls and roof structure: RECO No. 80. For insulation work and reduction of heat losses: RECO foil laminates.

We will gladly send samples of these on request or a technical representative to discuss their application to your particular problem. Neat, practical, economical answer to many problems of lining, proofing and insulation, IBECO has advantages no other product of its kind can offer . . . In IBECO the proofing is part of the paper itself, integrated with the paper's fibres while these are still fluid. Result: A paper waterproofed throughout its substance, with no 'free' bitumen to harden, crack, leak or sweat out. You can fold IBECO, crease it, trample it—it stays waterproof. Additionally, it's light in weight, small in bulk, easy to transport and handle on site, and very reasonable in price. Where there's building, there's a job for IBECO.

#### DAVIDSONS PAPER SALES LTD.

Head Office: Mugiemoss Mills, Bucksburn, Aberdeen. Branches: 82/84 St. John Street, London, E.C.1. 31 North John Street, Liverpool, 2. 9 Albion Street, Leeds. 42 Corporation Street, Newcastle-on-Tyne. Laird Place, Bridgeton, Glasgow S.E. Boroughloch Square Edinburgh. 4 Trinity Quay, Aberdeen.

## British Industry specifies FALKS



FALKS "Imperial" cast-aluminium tungsten lighting fittings aid fluorescent pit inspection units at the Norwich Diesel Depot of British Rallways (Eastern Region)

### A FREE LIGHTING SERVICE

Our expert lighting engineers based in all principal cities of the U.K., will without obligation, advise you on any lighting problem large or small and prepare lighting plans for your approval.

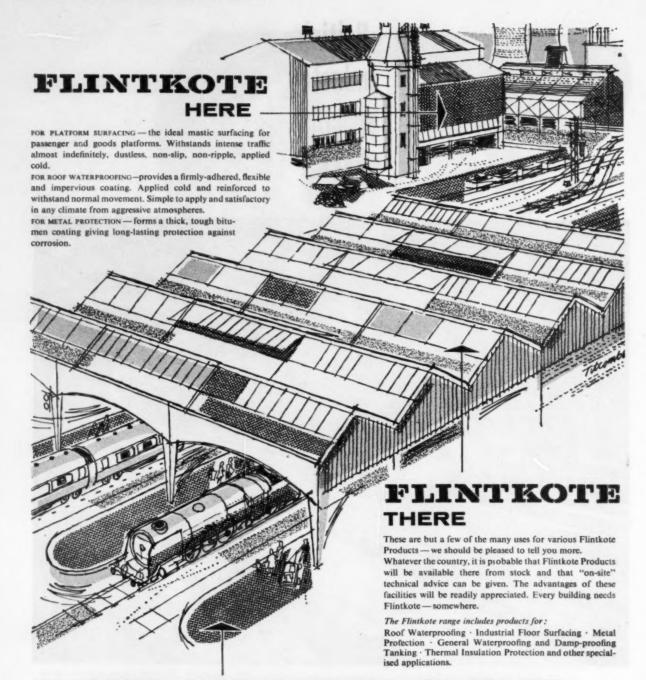
Write for Industrial Lighting Catalogue.

PLANNED, EFFICIENT LIGHTING saves money all along the line

FALKS, the long-established lighting specialists, designers and manufacturers of all types of fittings.



\$1 FARRINGDON ROAD, LONDON, E.C.1. HOLborn 7654. London Showrooms: 20/22 MOUNT STREET, PARK LANE, W.1. MAYfair 5671/2



## FLINTKOTE

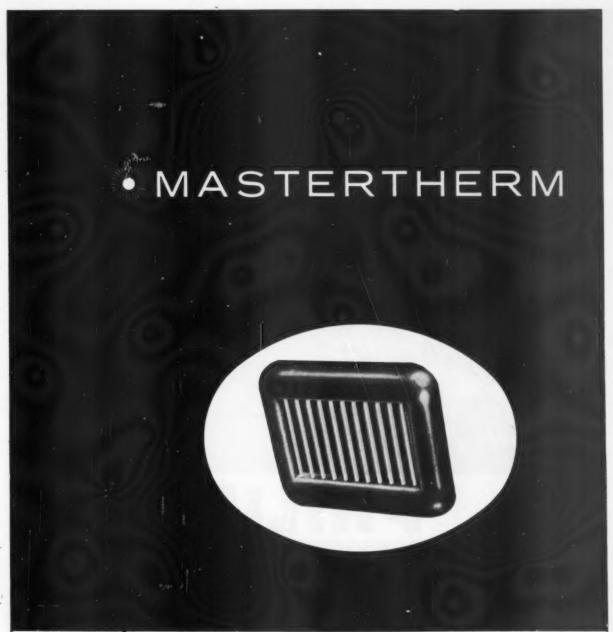


OARE DE MULHOUSE — FRANCE (S.N.C.F.) Flintkote flooring in busy goods depot subjected to heavy traffic.



ALMOST EVERYWHERE

THE FLINTKOTE COMPANY LIMITED Adam House One Fitzroy Square London W.1 Telephone: EUSton 7224.





All models

available

ignition.

for automatic

#### FOR 'SPOT' OR 'FULL' HEATING

Fitted with high efficiency radiant gas burners they can be tilted to any angle from 30°-70°. For lasting wear the streamlined casing is made in cast iron with a vitreous enamel finish. Models available for wall or suspension fitting.

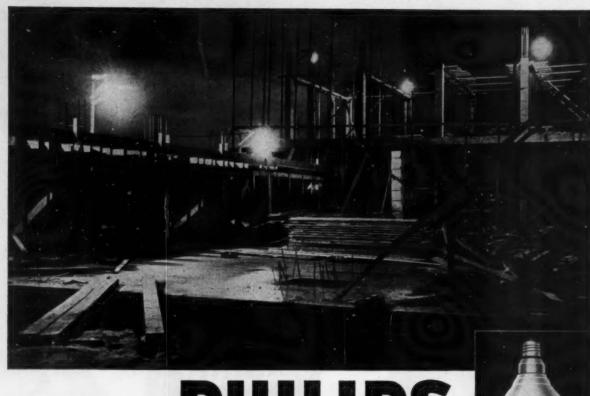
MASTERTHERM No. 1 approx. coverage 200 sq. ft. MASTERTHERM No. 2 approx. coverage 325 sq. ft. MASTERTHERM No. 3 approx. coverage 450 sq. ft.

Send for details of the Mastertherm and the full Radiant Heating range to Radiant Heating Limited, Radiant Works, 9 Barnsbury Park, London, N.1. NORth 1677



## TOUGH LAMPS FOR A TOUGH JOB

AND NO SPECIAL WEATHER PROTECTION NEEDED



## PRESSED GLASS

-a simple system of all-weather illumination

Philips Pressed Glass Lamps are the outcome of a revolution in lamp-making. Thanks to their unique construction, they not only give greater directional light intensities than standard reflector lamps of equal wattage: they can also be used in all weathers without special protection. In fact, for all floodlighting jobs these new Pressed Glass Lamps from Philips offer new standards of illumination, greater simplicity, and economy of operation.

For full specification and details of how Philips Pressed Glass Lamps can give low-cost, high-efficiency floodlighting, please complete and post the coupon below:



150 watt Spotlamp



160 watt Floodlamp



To: Philips Electrical Ltd., Lamp & Lighting Group, Century Hsc., Shaftesbury Avenue, Lendon, W.C.2.

Please send me full informa-tion about Philips Pressed Glass Lamps.

Name	
Comp	any
Addre	00

**PHILIPS** 

LEAD THE WORLD IN LIGHTING

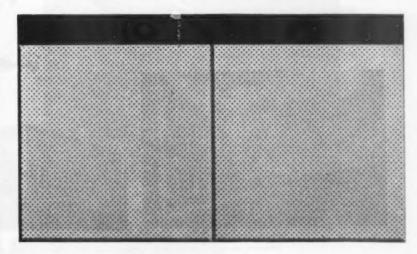


### DECORATIVE ACOUSTIC TILES . . .



## SUPPLIED AND INSTALLED BY CULLUM

Acoustic tiling is a specialised field . . . CULLUM have dealt in tiles for over thirty years—installing them in every type of building. Last year alone CULLUM sold and installed 2,000,000 square feet of acoustic ceilings. When you call in CULLUM you call in experts.



Sound control by

CULLUM

BRITAIN'S MOST EXPERIENCED ACOUSTIC ENGINEERS ...

CONCESSIONAIRES FOR ACOUSTI-CELOTEX AND BURGESS ACOUSTIC TILES

HORACE W. CULLUM & CO. LTD. The Acoustic Centre . 58 Highgate West Hill . London N.6 . Tel. FITzroy 1221



## ESCOL

## Resists <u>ALL</u> Normal Atmospheres

The porcelain enamelled finish of Escol Infilling Panels resists sea atmospheres, and is totally impervious to all normal atmospheric conditions. Colour and texture do not deteriorate; they require no maintenance other than occasional washing and are absolutely PERMANENT.



Boressone Primary School, Stirling
Architects: Alison & Hutchison & Partners, Edunburgh, in association with County Architect, Stirlingshire County Council.
Framing Man facturers: Standars Maclean Ltd., Hamilton. Contractors: Stuart Construction Ltd., Glasgow.





Stewart & Gray Ltd.
offer a specialised service in the
development, manufacture and all
technical aspects of porcelain enamelled
steel in architecture. It is 4the
disposal of all architects.

STEWART & GRAY LTD SWAINS RD, LONDON, SW17. Tel: MITcham 1634 (5 lines)

P.3755

## BRIGGS solved

At this detail above opening North light glazing, it was necessary to provide a weather trim to the movable glazing frame incorporated in the aluminium section, which normally closes off the decking at this point.

Accuracy was essential to give a site clearance of 3/16" over many hundreds of feet and was achieved by fabricating a special aluminium closure consisting of three separate sections welded together.

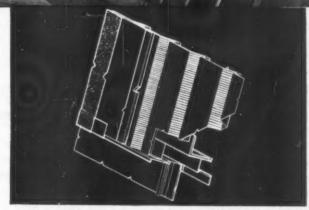
HENRY WIGGINS & Co., Hereford

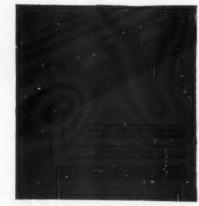
Engineers: W. S. Atkins & Partners, London





The resources, technical knowledge and experience of the Briggs Organisation are at the disposal of every Architect and Engineer. Consult our nearest area office for further details of Briggs Technical Design Service.





BRIGGS

the people to see about roofing

### WILLIAM BRIGGS & SONS LIMITED

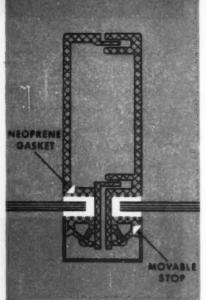
VAUXHALL GROVE, LONDON, S.W.8 REGD. OFFICE: DUNDEE AREA OFFICES: ABERDEEN · BELFAST · BRADFORD · BRISTOL · CARDIFF · DUBLIN EDINBURGH · GLASGOW · LEICESTER · LIVERPOOL · NEWCASTLE · NORWICH

# CUT COSTS...SPEED CONSTRUCTION with Compression Seals of DU PONT Neoprene



Pre-formed compression seals made of Du Pont Neoprene used for the curtain wall system in New York's International Airport, Idlewild, (above) were easy to install. Seals are effective . . . economical and far outlast conventional glazing compounds. They ensure a weatherproof, trouble-free seal that won't crack, dry out, become hard, soft, or "set" and lose sealing pressure. Sketch shows sealing method architects followed. Neoprene gaskets resist sunlight, oxygen and ozone. They stand up against exposure to the elements, and Neoprene's long service record in other products indicates they will provide dependable protection for many years. The simplicity of installing neoprene gaskets for curtain walls, helps solve the problem of sealing glass or panels into frames at minimum cost. No special skills are required to install them right on the job and there is little risk of careless workmanship producing a faulty seal. For more information on compression seals of Neoprene, see your Du Pont distributor, or send the coupon below for booklet, "Neoprene Gaskets for Curtain Walls", describing various installations.

DISTRIBUTORS: Du Pont Company (United Kingdom) Limited, 76 Jermyn Street, London, S.W.1





## DU PONT NEOPRENE

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Du Pont Company (United Kingdom) Limited.

Room 504, 76 Jermyn Street, London, S.W.1, England Architects Jul. 12/60 (21 763 01)

Please send copy of your booklet,

"Neogrene Gaskets for Curtain Walls"

NAME

POSITION

COMPANS

ADDRESS

,

COLUMBAN



## **BOLT-FIXINGS BEFORE YOU POUR-NO HOLES TO BORE!**

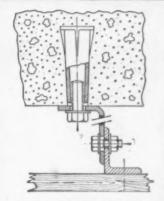
When bolt-fixings are required in concrete, and their location is known before the pour, Rawlplug Cement-in-Sockets will save you a great deal of time and trouble. The Cement-in-Sockets are attached to the inner face of the shuttering prior to pouring. When the concrete has hardened, the shuttering is struck leaving the Cement-in-Sockets in predetermined positions.

#### **KEYED FOR STRENGTH**

Rawlplug Cement-in-Sockets are made

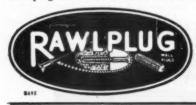
of malleable iron and shaped with four side fins and flanged base to ensure a strong permanent fixing. The key thus provided is so efficient that the strength of the fixing is determined by the strength of the concrete itself! Rawlplug Cement-in-Sockets are available for Whitworth bolts or set screws diameters from \( \frac{1}{4}'' \) to 1''.

Write now for full details of Rawlplug Cement-in-Sockets. Advice as to their application to your special needs gladly given without obligation on your part.



## SOME IMPORTANT USES FOR RAWLPLUG CEMENT-IN-SOCKETS

- —when moulding post or pre-tensioned concrete members.
- —when pouring floors to which false ceilings are to be fixed.
- —for providing ready-made bolt-fixings for partitions, pipe runs, ventilating ducts, heating units, handrails, cable racks, etc., when constructing lift shafts, stairways, bridges, tunnels, sea walls, etc.



## **CEMENT-IN-SOCKETS**

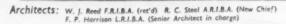
one of the 23 different types of Rawlplug Fixing Devices for speed and strength

THE RAWLPLUG CO LTD · CROMWELL ROAD · LONDON SW7



**'STEELPLATE'** The first choice of Architects
The Door with the Five Year Warranty

Technical Literature available on request.



For all types of toughened glass consult the manufacturers



STEELE'S LIMITED

THE GLASS WORKS, STAMFORD ROAD, LONDON. N.I. Telephone CLissoid 1121 (P.B.X.)

# ETCHHOO

The soft wood actually burnished from its face, hard growth remains in bold relief forming a mosaic of natural wood formations.

Intricate...a living pattern that never repeats.

Panel size: 8 x 4 feet
Thickness: 5/16"



N. R. M. Morison Esq., 1-3 Regent Street, London S.W. 1 Please send me a free ETCHWOOD folder.

Name

Address



SEABOARD

CANADIAN DOUGLAS FIR

PLYWOOD

Seaboard Lumber Sales Co. Ltd. Seaboard House, Vancouver 1, Canada.



## **BRONZE CLADDING**

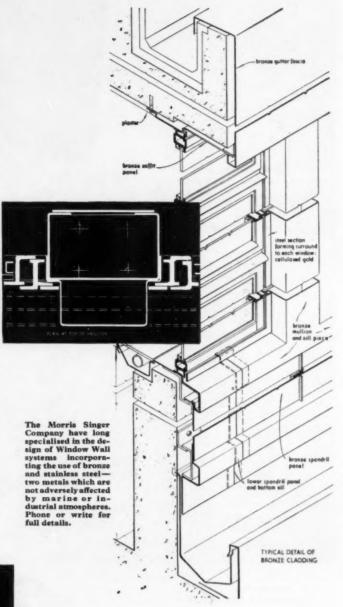
### Peter Robinson's Store, Strand London

Architects: Denys Lasdun & Partners

Bronze was chosen for cladding the main facade of this fine new building in order to effect a black or bronze black surface which would maintain its colour and texture by natural weathering in the London atmosphere.

As bronze attains this dark colour only after many years of exposure it was necessary to accelerate the process by treating the surface of the pressings. This was achieved by using the two natural weathering agents.

Bronze treated in this manner will retain its colour permanently, provided that precautions are taken to obviate electrolytic action.

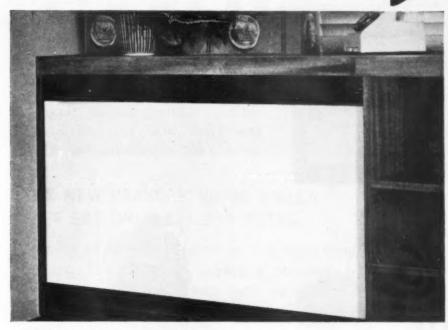


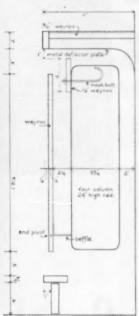
## **Morris Singer**

#### THE MORRIS SINGER COMPANY LIMITED

Hope House, Gt. Peter Street, Westminster, S.W.I. Telephone: ABBey 4701 Head Office & Works: Ferry Lane, London, E.17. Telephone: LARkswood 1055

# RADIATOR FASCIA PANELLING IN





LOCATION: Modern Office Block, Holborn

ARCHITECTS: Drew & Salisbury

**PROBLEM:** To replace, by some practicable, solid material, all-over metal grille fascias which were restricting heat output from radiators. The required material had to ensure maximum heating efficiency, while remaining inert, and be easily and economically decorated.

WHY WEYROC WAS THE ANSWER: In choosing Weyroc for the job, the Architect was influenced by its stable characteristics which make it resistant to heat without shrinking, twisting or warping. Moreover, the quality of the Weyroc surface allowed for simple working and finishing (in this instance, with paint). Trade price of Weyroc (\frac{3}{4}" nominal) is 1/6d. per sq. ft.—subject to the usual standard discounts.

8' x 4' boards of Weyroc were cut to required panel size and hinged to allow access to radiator.

Convection efficiency was achieved by leaving air intake and outlet spaces at bottom and top, and by fitting a curved cove behind the radiator.

#### NOTE FROM THE MANUFACTURERS OF WEYROC

Fascia Panelling is only one of many applications of this constructional 'sheet' material. Weyroc is also being used with great success for partitions, roof-cladding, built-in fitments, bath panels, doors, be glad to supply Architects with a detailed Weyroc specification sheet and board sample, on request to: Dept. A.J.19



THE AIRSCREW COMPANY & JICWOOD LIMITED · WEYBRIDGE · SURREY

## KEEP IT CLEAN



In the modern hospital, vital considerations of hygiene render it imperative that sanitary installations of any kind should be the finest obtainable, reflecting all the qualities that are inherent in Ceramic Glazed Fireclay. Ceramic Glazed Fireclay not only looks clean - it is clean. White is the enemy of dirt. The gleaming white surface of Glazed Fireclay is impervious to dirt and grease, resistant to acids, alkalis, staining, scratching and abrasion. With its strength, solidity and sturdiness, its resistance to extremes of heat and cold, its capacity to stand up indefinitely to the most drastic wear and tear, the need for costly replacements is virtually eliminated. In Ceramic Glazed Fireclay you have quality and durability. And in the long run you have economy, too.



SPECIFY SANITARY FIRECLAY WARE FOR PERMANENT SATISFACTION

# LOW COST SMOKELESS

**SPACE AND WATER HEATING FOR COUNCIL HOUSES** 

## THE NEW PARKRAY No. 10 BOILER FLUE SET ONLY £7:17:9 RETAIL

A really efficient installation for the really tight budget. The complete appliance consists of the Parkray Clean Air Fire (with ashpan and operating tool) boiler, boiler damper and brick side cheeks—all at a retail price of only £7.17.9, gas ignition and chrome steel bottom grate are optional extras. The removable front fret is in a choice of 6 colours—and it can be changed at any time.



#### **PERFORMANCE**

Space heating: up to 1,500 cu. ft. (traditional insulation). Water heating: 10,000 B.t.u./hr (with boiler damper open); 7,500 B.t.u./hr (with boiler damper closed). The hot water output can be used for domestic hot water or for heating up to 35 sq. ft. of radiator surface.

For space heating only, the Parkray Clean Air Fire is available separately from £2.4.6 retail, gas ignition is an optional extra.

Both the Parkray Clean Air Fire and the Parkray No. 10 Boiler Flue Set are approved by the Domestic Appliances Council on behalf of the Minister of Power.

Write for full details to: Radiation Group Sales Ltd Solid Fuel Division 255 North Circular Road London, N.W.10.

**Parkray** 

SPACE AND WATER HEATING



## LET July 2 40 2 DONKEY WORK

If you have a Catering Equipment project on hand, we are at your service. No matter how large or small your requirements, we will take care of your planning, equipping and installing problems.

Please send further information of service and equipment
NAME
ADDRESS
"Stotts of Oldham" VERNON WORKS OLDHAM LANCS

## AMTICO

### Here are the practical advantages of the most beautiful flooring in the world

The Range

Amtico offers an almost unlimited range of colours, effects and patterns . . . plain colours, Terrazzo, Marbleized . . . Renaissance simulated marble, Celestial, Stardust Fantasy, all with a striking translucence . . . the glory of Travertine, the freshness of traditional Delft . . . Textura with simulated, dimensioned Mosaic and contemporary surface effects . . . cork and wood grain styles . . . Eldorado metal effects . . . smart, budget-priced Carefree and Vinyl Plastex.

Data

Amtico homogeneous vinyl is solid vinyl, colours through thickness. Gauges .080" and \( \frac{1}{8} \)" standard tile sizes  $9 \times 9$ ,  $12 \times 12$ and 36 × 36. Other sizes to special order.

Main Dealers: Cardiff—James Howell & Co. Ltd. Colchester—T. M. Locke Ltd. Newcastle—Harkers Ltd. Nottingham—Hopewells Ltd.

Flooring Contractors who can give further details-

Flooring Contractors who can give further details

London—North
Veitch Co. Ltd., N.15
Franchi W-od Mosaic
Co. Ltd., N.8
Heaton Tabb, N.W.10.
Haskell Robertson, N.W.5
London—South
The Great Metropolitan
Flooring Co. Ltd., S.W.1
Gardinal Flooring Co.
Ltd., S.E.5
Cardinal Flooring Co.
Ltd., S.W.1
Ajax Flooring Co., S.W.1
Resilient Tile & Flooring
Co. Ltd., S.W.18
Jek Floors, S.E.22
London—West
London—W

Jek Floors, S.E.22
London—West
Everwear Installations
Ltd., W.1
Zenith Flooring Co. Ltd.,
W.C.1
W.C.1
Lammertons Contracts
Ltd., Folkestone
Dunns Ltd., Bromley
Lncashire

W.C.1
Lammertons Contracts
Ltd., W.5
Gerratt Ltd., W.1
Catesbys Ltd., W.1
British Mouldex Ltd., W.1
Dolphin Office Contracts
Ltd., W.8
Hesters Ltd., W.1
Marshall & Snellgrove
Ltd., W.1
London - East
Liverpool
Liver

London—East John Archer & Co. Ltd., E.C.: N. Pollard & Co. Ltd., A. H. Herbert & Co.

Val de Travers Bedfordshire Neofloors Ltd., Bedford Englewood Ltd., Luton Berkshire S. H. Ware & Co. Ltd., Cheshire F. S. Thompson Ltd.,

Stockport
Northern Flooring Co.,
Hyde Derbyshire
Pitchmastic Asphalt
Paving Ltd., Illeston

Devon A. N. Coles, Plymouth Durham 3. S. Cooper, Sunderland Harkers Ltd., Newcastle Essex T. M. Locke Ltd.,

Gloucestershire Baileys Ltd., Bristol Cavendish House, Cheltenham

Liverpool Veitchi & Co., Liverpool R. W. Brooke & Co., Liverpool, 1 Flooring Northern Ltd., Liverpool
Lees Higginbotham &
Son, Oldham

Middlesex Horsley Smith & Co. Ltd., Hayes Norfolk Floorings by March, Norwich Northamptonshire

Normamptonshire
S. S. Flooring Services,
Peterborough
Netherton Ltd.,
Peterborough
Warden Flooring Co.,
Kettering Warden Flooring Kettering British Mouldex, Wellingborough

Northumberland Harkers Ltd., Newcastle

Richmond
Frys Floors, Crovdon
All Floors Ltd., Croydon
Gabriel Floors Ltd.,
Guildford
Humberson, Woking
Decorative Floors Ltd.,
Reigate

Register

Sussex

Horsham Flooring Co.,
Horsham

Attew, Hove, 3
Frys Floors, Brighton
Maxwells (Hove) Ltd.,
Brighton

Warwickshire
The Coventry Tile Co.,
Coventry
Sam Robbins Ltd., Rugby

A. H. Herbert & Co.
Ltd., E. 17
Inlaid Rubolin Flooring
Ltd., E. 8
Son, Oldham
Letes Floors & Tiles Ltd.,
Leicester
Val de Travers Ltd., E. C. 4
R. Scandolo Ltd., Leicester
Middlesex
Vorkshire
Son, Oldham
Letco Floors & Tiles Ltd.,
Sheffield, 3
Sosoph Hargreaves Ltd.,
York

WALES Denbighshire North Wales Floorings, Colwyn Bay Glamorganshire James Howell & Co. Ltd., Cardiff

CHANNEL ISLANDS J. W. Huelin Ltd., St. Helier, Jersey

SCOTLAND V. G. (Dundee) Ltd., Dundee Thomas Love & Sons Perth Nottingham
Oxfordshire
S. H. Ware & Co. Ltd., Oxford
Minoli & Co. Ltd., Oxford
Stephenson & Co., Oxford
Glasgow, C.4

Perth
Treron, Glasgow
Thomas Justice & Son,
Dundee
Macdougall & Son,
Glasgow
Glasgow
Glasgow, C.4

Glasgow, C.4

Also Head Offices and branches of: O Head Omees and Branches of .

Durastic Ltd. Korkoid Decorative Floors Limmer & Trinidad Lake Asphalt Co. Ltd. J. A Hewetson & Co. Ltd. Semtex Ltd.

CITY 1056

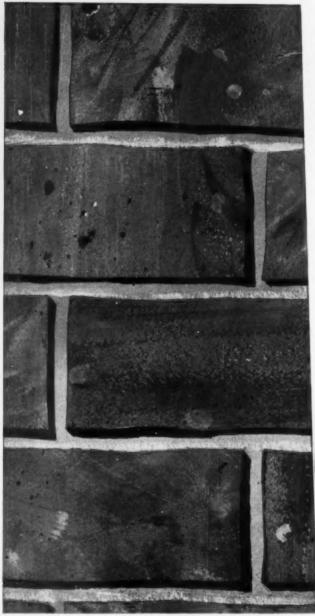
Please ask for full list of contractors from-TUMASCO LEMITED, 23 OLD BAILEY, LONDON, E.C.4 SEE FACING PAGE



Check-mated with check...taste and tone superb! Pure vinyl—choosing AMTICO is a sure move to winning floormanship. Whatever the finish—AMTICO lasts as well as it looks! Resilient, radiant, many coloured...as versatile as the Queen, as necessary as the King...AMTICO is the most beautiful flooring in the world!

SEE FACING PAGE

HUMASCO LTD., VINYL COVERINGS, 23 OLD BAILEY, E.C.4



Walcrete makes better mortar

Walcrete needs no additives

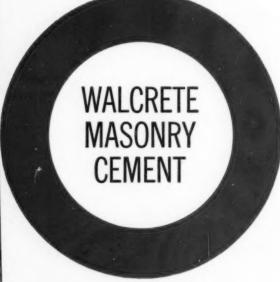
Walcrete produces a good bond

Walcrete spreads like butter

Walcrete has adequate strength for all mortar requirements

Walcrete is made under rigid laboratory
control to Blue Circle standards.

The materials used in its composition are
accurately proportioned and intimately
mixed-in during manufacture.



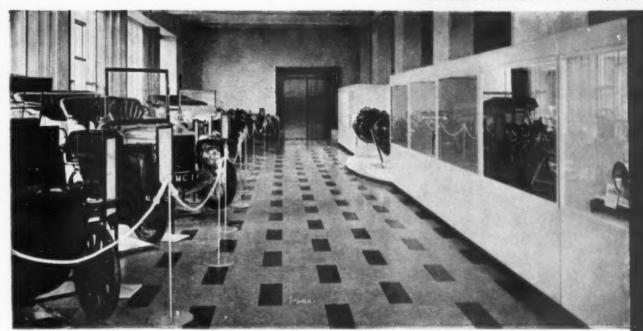
# WALCRETE

COSTS LESS
FOR BETTER MORTAR

Walcrete
is one of
the Blue Circle
alds to
better building

Write for further details to:

THE CEMENT MARKETING COMPANY, LTD · PORTLAND HOUSE, TOTHILL STREET, LONDON, SWI
G. & T. EARLE LTD, HULL · THE SOUTH WALES PORTLAND CEMENT & LIME CO LTD · PENARTH, GLAM.



These floors in the Herbert Museum and Art Gallery, Coventry are covered with Williamson's heavy grade linoleum (4.50 mm.)

# Modern linoleum for modern installations

Low capital cost, ease of laying, durability, minimum maintenance, quality of finish and appearance . . . judge how you will, Williamson's linoleum is unequalled as a commercial or industrial floor covering. From the design point of view, Williamson's offer a range of linoleums with colour values carefully chosen to complement modern decors. Designers and architects can find in this range just what they need to carry through a scheme—and carry it through economically. Specialised knowledge is readily available. For advice and information, please contact the Williamson Technical Advisory Service.

#### WILLIAMSON LINOLEUM

JAS. WILLIAMSON & SON LIMITED . LANCASTER . FOUNDED 1844

Architect: Herbert, Son & Sawday, F.A.B.I.B.A. Contractor; Coventry Tile Co. Ltd.



Early consultation . . .

The architect states
the problem to
the contractor and
the specialist



The architect and contractor listen to the specialist's proposals



The architect,
the contractor and
the specialist agree
to the solution



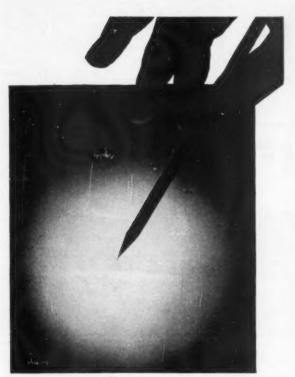


BISON floors, beams and concrete frame structures

SPEED & STRENGTH

CONCRETE LIMITED are the largest structural precast concrete specialists in the world

CONCRETE (SOUTHERN) LIMITED Green Lane, Hounslow, Middlesex Hounslow 2323 London Sales Office: 16 Northumberland Avenue, W.C.2 Whitehall 5504
CONCRETE (MIDLANDS) LIMITED Dovehouse Fields, Lichfield, Staffs, Lichfield 3555 Birmingham Sales Office: Winchester House, 5 Victoria Square, Birmingham 2 Midland 0331
CONCRETE (NORTHERN) LIMITED Stourton, Leeds 10 Leeds 73211 Manchester Sales Office: 40 King Street West, Manchester 3 Blackfriars 5676
CONCRETE (SCOTLAND) LIMITED Etna Road, Falkirk Falkirk 2366 Glasgow Sales Office: Elmbank Street, Glasgow C.2 City 3292
60/7



# "probably the most potent instrument in the world"

For it gives most of man's thoughts and aspirations their first tangible form.

Consider a pencil, What an elegant little shaft it is! Basically simple, yet how indispensable to the most complex design! Notice how comfortably it sits in the fingers; for the polished cedar hexagon of a well-bred pencil with its many coats of gleaming lacquer, never forces itself upon one's consciousness, but, like a good servant, unobtrusively awaits one's bidding. Its smooth dense lead will give perfect reproduction of the finest lines, which nevertheless can easily be erased. The perfect point good humouredly stands heavy pressure and does not break, even when dropped. Pick up any degree from 6H to 2B (easily recognised by the coloured ends), they are true and never vary.

How fortunate is the draughtsman who finds all these attributes embodied in one pencil!

Perhaps that is why Rolls-Royce exclusively specify Koh-i-noor in their drawing offices.



TO L. & C. HARDTMUTH (GREAT BRITAIN) LIMITED KOH-I-NOOR FACTORY, CHARD, SOMERSET

Please send free samples of Koh-i-noor Draughtsman pencils for testing.

NAME OF COMPANY

ADDRESS.

NAME OF CHIEF DRAUGHTSMAN



The Architects' Journal

No. 3425. Vol. 132. December 8, 1960

9-13 Queen Anne's Gate, London, S.W.1. Whitehall 0611 Subscription rates: post paid, inland £2 15s. 0d. per annum; abroad £3 10s. 0d. per annum. Single copies, 1s post paid, 1s. 6d. Special numbers are included in subscriptions; single copies, 2s.; post paid, 2s. 6d. Back numbers more than 12 months old (when available), double price. Half-yearly volumes can be bound complete with index in cloth cases for £1 17s. 6d.; carriage 2s. extra.

NOT QUITE ARCHITECTURE

# WORLD, the; book to change, a

The manuscript notes for volume one of my war memoirs (Catalysts of Victory; the unique contribution of Bagehot Street Warden Post) contain a remarkable number of references to Baroque architecture, more than my experience of the art would have justified. The reason? Scene: a late summer evening in the Horsefair, Bristol. Queue of blitz-happy citizens at a bus stop; at head of queue, a crew-cut schlerm in a CD overcoat (no coupons for a civvy one) propping up bus-stop sign and reading paper-back book. Bus arrives, momentarily masking queue from sight. When it moves off, crew-cut, with the inevitability of a gag in Hellzapoppin! is still propping up the sign and reading the book.

You bet it was good book! Open at the page showing the plan of Balthasar Neumann's Vierzehnheiligen, it was a first edition, still smelling of fresh ink, of Pevsner's Outline of European Architecture. I can still see the back of that blasted bus as it pulled away, graven in my mind's eye as a marker for the moment when I became an architectural historian, embarked on a round-about journey that was to bring me (among other things) to see the author in the flesh, for the first time, when he lectured on Neumann at the Courtauld, and later to put together most of Theory and Design under his eagle eye.

But this me-history is only symbolically relevant as illustrating the history of the whole call-up group who acquired Pelican Outlines straight off the press in 1943. We were the first generation to come to the live study of architectural history uncorrupted by previous contact with Banister Fletcher. For us it was never the embalmed death-roll of mislabelled styles that old BF made it; for us it was always a snap-crackle-pop subject. The Outline changed the outlook, for good, and quite as much as cheap colour photography. And you in second year history class, listening to your







#### Floating Hotel's Death Knell

At last our standard of design of ship interiors is catching up with that of the Scandinavian countries. On pages 819-832 we show the P & O-Orient Line's new *Oriana*. In nearly all respects, from public rooms to such details as direction-signs, the result is simple and appropriately and pleasurably ship-like. In little ships our standard has also risen, as is shown by the interiors, above, of the lounge and left, the smoke room and bar of the 4,174 ton, 1,400 passenger, Channel Isles steamer *Caesarea*. Responsibility for these advances lie with enlightened clients and highly competent architects: Design Research Unit being the coordinating architects of the *Oriona* and Dr. F. F. C. Curtis, the British Transport Commission's architect (assisted by R. L. Moorcroft), designing the *Caesaria*.

beloved year-master Kodachromin' in the gloamin', should reflect that if the visuals are by permission of the 35-millimetre industry, the copy is pretty certain to be Pevsner-and-water.

And now, 17 years, five editions and a quarter of a million copies later, here it is in a giant jubilee edition that takes two hands to heft, but still published by Pelican at a mere six guineas if you get it soon, seven if you leave it to the New Year. Success! Success!—this is not the first hard-cover edition, since John Murray did one in 1948, but this quite clearly is the definitive edition, definitive as a tomb-

Tombstone? Yes, I think so; this edition worries me. Not for what it is-it's difficult to think of a more desirable object to have around the place come Christmasbut for what it has ceased to be. This is not out of sentimentality either. The paperback was always an expendable product with me, used to destruction and replaced by a new edition or a new reprint. But while it was in paperback it was a sharp-edged weapon, like J. M. Richards's Introduction to Modern Architecture or C. H. Waddington's Scientific Attitude-all sharp enough to slice through fatigue, mental staleness, the noise of war and transport, the hostile atmosphere of barracks and digs, to slice right through to the heart of all forms of aesthetic fuddy-duddiness. To do that the Outline needed those crammed pages of type, where the facts and arguments crowded close after one another, it needed the thin pocket format to go anywhere and be picked up at a moments notice.

But stretch that argument over 700 pages in a tome that resists picking up and carrying, requires a desk, a chair and a library lamp, and I don't think it works. Those half-dozen cavalier paragraphs that roughed in the Pevsner line on the Renaissance are fine in a fighting paperback, but in a big German reference work they need to take some account of Wittkower's fundamental criticisms of the Pevsner line. That opening sentence-A bicycle shed is a building, Lincoln cathedral is a piece of architecture -that deflated three generations of William-Morris sentimentality, just looks like an unsupportable generalisation when buried in five pages of introductory apparatus, What we have here is no longer an integrated educational torpedo, but an imaginary museum of architecture haunted by the ghost of an argument.

Mais quelle musée! At their worst, the plates are excellent: at their best they are so beautiful you almost burst into tears. Any one of the Malraux aesthetic crush would give their eyes to have pictures like this in their museums without walls, reproduced and machined to this level of quality. Whatever may have happened to the book that triumphantly made architecutral history a pop subject, these illustrations are quite as much of a Pevsnerian triumph as that quarter-million sales figure.

The Editors

STATUS-OR STATUS QUO?

E are sorry that the Institution of Municipal Engineers has chosen to answer the RIBA's Memorandum to local authorities pointing out the advantages of establishing an architect's department, with a document that is both ill-tempered and misleading. We publish their statement in full on p. 815 (although we gave only a summary of the RIBA Memorandum on November 10), since we prefer to let readers judge for themselves rather than engage in a slanging match on the basis of picking sentences out of a document few will have read.

We must however repudiate at once the unworthy claim made by Mr. Overfield, on behalf of the Council of the I.M.E., that this is a case of mere "status seeking" by the architects, although one may suspect that status is what Mr. Overfield is defending.

The RIBA's point is simply that architects are trained to design buildings, and therefore should be employed to do so; nobody is demanding that architects should take over the design of roads, bridges, sewers, or any of the vital work done by engineers and surveyors: why then be so ready to defend the right of a borough surveyor to design a housing estate—as reported from Berkhamsted in this issue?

To this, the I.M.E. make several, somewhat contradictory, replies: first, that "the vast majority of technical work carried out by local authorities is in engineering and surveying and these subjects form the basis of town and country planning." In fact, three-quarters of local authority investment is in building, and we seriously question the second part of the assertion, that the basis of town and country planning is engineering and surveying. Town and country planning requires teamwork by all the experts to ensure that it is rational, but it is surely the architect's work in the end which will decide to what degree the results will also be liveable and in any degree beautiful. (One may admit that not nearly enough architects build anything like as well as could be wished, and at the same time insist that in general an architect will design a better building than a surveyor or engineer.)

In the second place, the I.M.E. claims that there is really no point in the RIBA's plea for the establishment of architects' departments, since most borough engineers' departments employ qualified architects as assistants: our answer to this is that, since the local authority in such cases does recognise the need for the architect's skill as well as the engineer's, it would be better advised to give the architect greater scope for his skill, by establishing an architect's department, and to attract architects of high calibre by giving this scope.

As Arthur Ling pointed out at the RIBA Press conference on the Memorandum, an architect in charge of a department has direct access to the local authority committees for whom he works: he meets his clients, the chairman of the Housing Committee, the General Purposes Committee and so on, and can explain his ideas, and sell new ideas for the development of their town or borough: if he is an assistant in the engineer's department he will merely carry out the instructions of the chief engineer. The best architects will not undertake local authority work on those terms.

The engineer/surveyor is in charge of many local authority building teams today simply because of the historical development of local government: he was the first technical officer in the field, when local authorities were responsible largely for providing the public health services from which all their work has stemmed.

It is no offence to the engineer or surveyor, whose work remains just as essential and highly specialised as ever, to say that it is now an anachronism to leave housing and town planning, and all the multitude of welfare and amenity building undertaken by local authorities today, on his shoulders.



JOHNSON'S WAXING

When Philip Johnson talked to AA students last week, on his first trip to Britain for ten years, ASTRAGAL concealed a spy in the audience, and can therefore publish a report on jottings made in between the gales of laughter that accompanied the flamboyant peroration.

Mr. Johnson said that his philosophy ("as I was coming here I thought I ought to have one") was "one of functional eclecticism (pause) or of eclectic functionalism." He has given up housing to avoid the poor-house, no longer believes in urbanism, thinks the trend in monumentalism is not bad ("I like doing museums") and asserts that "you have to be a very rich man to be a responsible architect." He also made the following observations: On office building. "Seagram is the end." On Seagram. "So whisky needed a building. It's not irresponsible." On the Situation. "Well, if we're going to have chaos, let's have a really nice juicy chaos." On The Bomb. "Maybe we have two years only, so have a good time and don't take yourselves too seriously."

It seems that all this—and a relevant collection of slides—was accompanied by twinkling eyes, flashing horns and a Macy's forked tail which lashed out engagingly at questioners. My spy, who found it a bit pixilating, pulled his shingled New Harmony cloche hard down over his ears and went away to meditate on Organisation Man.

P.S. Overheard from a senior member of the audience: "Who does he think he is, God?"

JUST ONE MORE CHANCERY

My congratulations—of the most ornate and baroque kind—to Sir Basil Spence, for becoming architect of the new Chancery building of the British Embassy in Rome. The job would tax the patience and ingenuity of the most diplomatic of architects. Slap in front

of the site—the partly overgrown garden of a villa beside the ancient wall of the city—stands a late work of Michelangelo, the Porta Pia. Unless the Embassy office block is built well back, comparisons between the old and the new will be inevitable and vociferous. ASTRAGAL hears that the decision to have a modern building, rather than a bit of MoW pseudish or poor man's Palladian, came from the Embassy people themselves. They deserve the profession's thanks in the form of the best building possible.

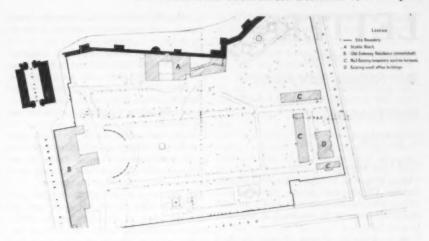
IT PAYS TO LIAISE

Ought the Government to give the Council of Industrial Design a larger grant? Mr. Noel-Baker, M.P., thinks so, and said so recently in the House. But when he went on television shortly afterwards he seemed so vague about the possible national benefits of such an increase (and he got his statistics so outrageously wrong) that nobody watching could have felt very enthusiastic about his proposals. And even the Council's director himself, Paul Reilly, wasn't allowed to come across with any crusading zeal in the rather curious interview in the same programme. ASTRAGAL got the impression that he was being over-produced. Certainly all that stuff about well-designed prune cutters fitting the hand and tea trolleys being mobile enough to slide across the floor at a touch wouldn't have meant much to the average tax-payer, interesting though it was to the informed.

If the tax-paying viewer is to be convinced of the value of the CoID, then he needs to be shown proof of its success in stepping up the sales of well-designed British goods. Such proof is available. A few months ago The Director published some comments by firms which had increased their business as a result of winning Design Centre awards. These firms should have been represented in the television studio.

ASTRAGAL agrees with Dr. John Murray (who startled the CoID by criticising it when asked to speak as its guest at a recent conference dinner) that "the only type of design for which the Board of Trade may properly use public funds to propagate is design which, in the final analysis, is commercially successful design."





The Porta Pia, and a plan of the site that will accommodate Sir Basil Spence's British Embassy. (See "JUST ONE MORE CHANCERY.")

But whatever your criticism of the CoID's methods may be, you have to admit that this is certainly what it is doing. If the Board of Trade made more money available to the Council this would not, I understand, be used only to make life easier for its conscientious, hard-working staff, but to increase the scope of its propaganda services. Some of the best work the Council has done-its propaganda abroad, for instance-has been done very much on the personal level. Unless the Council is given a chance to send more people out to spread the word (including a word or two about Design Index, that strange file of pictures and samples which includes quite a few horrors, but doesn't miss much of the good stuff), it will remain in the position of a manufacturer who has made a good product but cannot afford to advertise it adequately.

#### THE AID OF THE PARTY

I must say it was disappointing to find a trade booklet featuring the Eddystone lighthouse on its cover, and the bicentenary of John Smeaton's masterpiece in its introduction, and then chattering about plumbing and leadwork. In fact this seems a bad time for civil engineering books: Gollancz's promising translation of Fifteen Wonders of The World\* by Rene Poirier, just fails to be a good "pop" book. Still, if you can't remember the names of the designers of the Forth Bridge, the number of meridians traversed by the Great Wall of China, or just where the Ameri-

can Transcontinental railroad finally joined up, this might be a useful book to give yourself at Christmas, in readiness for all those tiresomely intelligent party games that other people play so well and organise so relentlessly.

#### IN RECEIPT OF YOUR STEAMED LETTER

Thieves who have thoughtlessly landed themselves with the job of sorting GPO mail bags in search of valuable letters will be greatly helped in future if they hold envelopes up to the light. Postal orders will now be enclosed, if the Post Office's new venture is a success, in coloured gift folders. Two are designed, harmlessly enough, for children. The two for adults are really rather agreeable as a comment on the postal service. One shows a distant helicopter (symbolising progress?) about to disappear behind a weed-hung brick pillar containing a letter box no one could trust. The other (described as "humorous") depicts a labelled elephant being pushed with difficulty by a postman. This, no doubt, is a GPO crack at the road system now manned by its former Postmaster General.

#### CLIENTS' CRIB

The new Anthology of Houses,\* by Monica Pidgeon and Theo Crosby, is a layman's book covering examples from Denmark to California. Architects might find it over-stimulating for clients because no prices are given and the introduction rashly proclaims that

"price varies in almost direct ratio to size." It is sad that even iconoclast Crosby, while pointing out that "only a tiny minority of architects are much more than competent technicians," advises people needing an architect to apply to the local allied society.

The houses illustrated seem uninventive and almost insipid are compared with the work of the Five California Architects described in Esther McCoy's new book.† If you have never heard of Maybeck, Gill, Charles and Henry Greene, and R. M. Schindler, it is time you did, and if you are satiated with the tedious repetition of clichés from the glossies, you will find this flashback to the early vigour of the modern movement a refreshing tonic.

#### NO MORE TENDERFOOTS?

Now that Americans can relax and get on with their Christmas shopping, it's interesting to see, from their glossy magazines, the sort of things they can buy each other this year. My favourite is a "he-man tooth paste" flavoured with whisky (" why fight oral hygiene: enjoy it!"). A close second is the "world's shortest nightie" which just covers the shoulders. And if the thought of that leaves you cold, you might like to picture the American male greeting the winter with six volts of electricity in each trouser leg-en route from a pocketed torch battery to a pair of electrically-heated socks.

ASTRAGAL

Price 25s.

<sup>\*</sup> Batsford £2 10s.

Reinhold: Chapman and Hall &.

## **LETTERS**

Lavender Westwood John Stillman, John Eastwick-Field, A. A.R.I.B.A.

Basil Dottridge C. F. Colt

#### SfB Classification

SIR: I have read Mr. Barbour's letter about the SfB Classification System published in your journal of November 24, and I would like to offer one of the ounces of experience he asks for.

I act as a one-day-a-week librarian in the office of Bryan & Norman Westwood & Partners, a medium-sized private practice. About the same time as your journal published the details of the SfB system of Classification we decided that our existing library, housed alphabetically in a large book case with a lot of irregular shelves and little glass doors, needed drastic reorganisation. We decided to try out the system as described by Mr. Bullivant.

The partners were interested but cautioned "nothing expensive" and in fact the whole library was set up with the utmost economy. We bought some adjustable steel brackets and planks of wood for shelving. A member of the staff put them up one evening and in return accepted the bookcase.

We now had four twelve-feet-long shelves and an immense pile of literature on the floor. There was no way of making all the floppy leaflets stand up. The neat sawn-off box files photographed in Sweden, and reproduced in your pages as an indispensable part of the system, were not obtainable.

I rang Mr. Bullivant who told me it was hoped some time in the future to import them from Sweden; they were not made in England. However, taking the photograph torn out of the JOURNAL in one hand, we eventually found a stationery firm\* who made us up a sample, and finally after one or two modifications, a gross of boxes at 1s. 10d. each. They do not appear to be as finished or as strong as the Swedish ones; they are made of folded card stapled together, but after about nine months' constant use they show no signs of wear. They are now readily obtainable at a slightly higher price than the prototype.

Instead of the Swedish binders I use ordinary pocket folders for containing the leaflets. These will accommodate practically all the assortment of paper sizes on which information arrives. The larger or stiffer catalogues stand in the boxes on their own.

The trade literature is housed according to the SfB Classification System; the boxes are labelled on the outside with the appropriate category and number. The files inside are labelled with the same number as on their respective boxes but the subdivisions are named, not numbered. This is because I have noticed that the majority of users of a library of our size would rather spend

three minutes trying to find what they want visually than one minute looking it up in the Index.

An alphabetical index had to be compiled from Mr. Bullivant's category list. This is typed and kept in a stiff binder in the library. I find it has to be expanded fairly frequently owing to the multiplicity of made-up branded goods continually appearing on the market.

I think the system works very well. Of course, any library classification system is purely arbitrary and depends finally on an alphabetical index, but I think this particular one has some important advantages.

The problem of providing information in an architect's office is not so much one of knowing where to lay hands on the particular catalogue or article, but how to get to the architect engaged on some particular project, information that would be useful but that he doesn't know exists.

Our present library being "do-it-yourself" means that all information comes through the post. Anything that is new or has a particular bearing on a current project we put in a folder marked "Recent Trade Literature" and circulate it round the office before filing. Magazines are dealt with in the same way. Further, the SfB system of grouping means that if you want Brown's Doors you must look through the folder labelled "Doors," thus incidentally refreshing your mind about all the other types of door available. Further, once you have understood the principle of the grouping, it is easy to use the library visually, which means once again you notice other things on the way.

Finally it is flexible: it can be expanded at any point by inserting another box and pushing everything along one; or subdivided at any point by adding more labelled folders; and it is cheap: worn-out boxes and folders can easily be replaced and it only needs a librarian's attention one day a week.

LAVENDER WESTWOOD

London, S.W.1.

SIR: The SfB Classification System has been in use by us for our Architectural Design Product Index File for 14 months. We find that there are many instances where duplication or cross-references are necessary to ensure that items are easily filed and found, but this is necessary in most systems. We find that the use of either bracketed figures or capital letters as the keys for filing, confuse many people and believe that if all components were to be filed under the bracketed figures (i.e. Functional Elements) with the capital letters as sub-divisionsthe system would be more easily understood, although Generalities and Materials would still need to be kept separate. This would be on the lines of a simplified system suggested by Mr. Eric Heaf, A.R.I.B.A. It is interesting to find that in a recent survey of 642 of our readers, 91.7 per cent were filing their Product Index Cards by the SfB Classifications, and less than one per cent raised any query on the System. these mainly being requests for expanded indexes, which will shortly be provided by the RIBA when they publish the Manual

and Index early next year.

BASIL DOTTRIDGE

London, W.C.1.

#### Danish Egg in Ireland

SIR: I cannot think why ASTRAGAL wants to entice Professor Jacobsen in talking a lot of rubbish about his "egg" chair. I am a proud owner of one of these but it needs a cushion in the small of the back and is not really comfortable. One cannot expect any man to design a chair that is comfortable for everybody. In any case, I bought mine to look at, not to sit on.

The chair in question is in the Irish Republic and I have a sneaking hope that it is the only one there.

Ashford, Kent.

C. F. COLT

Stillman & Eastwick-Field's SfB-classified library



SIR: We read Mr. Barbour's letter about the SFB Classification System in your issue of November 24: and we noted your editorial comment which suggested that there had been no experience of this system of classification in architects' offices—or at least that you were not aware of any.

We would like to say that we have in fact set up a library with SFB Classification in our office—together with an index compiled by ourselves—and it is working very well.

We enclose a photograph showing the
arrangement of files which may give some
indication to your readers of the likely
size of such a library in a medium-sized
office.

JOHN STILLMAN JOHN EASTWICK-FIELD

London, W.C.1.

### **NEWS**

#### RIBA CIRCULAR

#### Municipal Engineers' Reply

The following letter has been sent to the town clerks of local authorities by the Institution of Municipal Engineers, in answer to the circular of the RIBA to local authorities without an architect's department (AJ, November 10): Dear Mr. Town Clerk,

The President of the Royal Institute of British Architects has taken the unusual step of addressing a letter to your authority, advocating the establishment of a separate and new Department with an architect as a Chief Officer.

As a consequence I have been instructed to put before you the views of the Council of the Institution of Municipal Engineers on this matter.

If you have considered it necessary to bring the letter from the RIBA to one of your Committees I would ask you to submit this letter also to that Committee.

1. The Council agree that local authorities should obtain appropriate and skilled architectural advice, and in fact practically all of them are doing so at the present time; but the proposal generally to create independent architectural departments is made not in the interests of local authorities but to enhance the status of a particular profession, without due regard to the facts or the necessities of the case.

2. Considerably more than 50 per cent of the building work carried out by local authorities is of an engineering character, and cannot be designed and carried out by architects alone. Collaboration between engineers and architects is therefore necessary, and the problem is how such collaboration can best be obtained in the interests not primarily of either profession but of the local authorities which they serve.

3. These teams, each led by an Engineer to the Local Authority, have built with distinction, business efficiency and economy over 60 per cent of the 31 million local authority houses and many other buildings. 4. The creation of an independent architectural denartment would entail the co-operation of two separate staffs, each under its own Chief Officer. While this may be found to be desirable in certain of the largest authorities, it cannot be recommended as a method for general adoption. since it involves difficulties in securing coordination, and is wasteful of money and particularly of staff time. It should be pointed out that, where there are separate departments, staff cannot be readily transferred from one job to another, which is so necessary to secure the most economical use of personnel. Furthermore, separate departments mean duplication of staffs, accommodation and equipment, and consequently increased expenditure.

5. Undoubtedly the best method, from the point of view of economic and efficient local administration, is a single department co-ordinating and carrying out all building activities, including their engineering, architectural and planning aspects, controlled by one chief officer with assistants who are qualified in the various branches of the work to be carried out. Obviously such an arrangement will mean that assistants qualified in one profession will have to serve on the staff of a co-ordinating chief who is himself qualified in another profession. From the professional point of view there can be no more objection to architectural assistants serving under a co-ordinating officer who is an engineer and surveyor than there is to the reverse arrangement.

6. Sir William Holford in his letter to you suggests that better architects will work for your authority if you make an architect your chief officer. This argument if valid would mean that poorer engineers would work in a team headed by a chief architect, and consequently the vitals of any structure would be the poorer. Structural stability with overall economy are the essentials of a building and with these essentials one agrees it is highly desirable to combine beauty.

7. The Architects' statement mentions the number of authorities who have created separate departments but fails to draw your attention to the number who have been disappointed with the results and have abandoned the experiment either wholly or in part.

8. The Statement of the RIBA Council drawing attention to the outstanding work of the architects department in the London County Council and in the Ministry of Education infers that similar results would be obtained by creating separate architects' departments in most local authorities. By no stretch of the imagination does this follow.

9. The position of the London County Council is unique. Its income, population and resources equal or surpass those of some countries, and the salaries paid to their architectural staff are in accordance with these resources. An economic and sensible approach to architectural work in an authority of that vast size does not provide a parallel for the average authority of 40,000 to 100,000 population where all engineering, surveying, structural works, architecture and planning are under the control of the Engineer and Surveyor. It does not provide an argument to change well tried methods.

10. The most notable achievements of the team of Ministry of Education architects have been achieved by a programme of research well beyond the means of all but the wealthiest local authorities.

This example of central Government direction of architectural work, which provides the benefits of large-scale architectural research and planning is available to every local authority irrespective of how their architectural work is organised.

11. Similarly the results of work by architects on cost study and increasing efficiency are available to all architects however they are employed.

12. It is indeed unfortunate that there is a shortage of adequately trained and experi-

enced staff in most of the professions allied in building and that the rewards available in local authority work are insufficient to attract recruits from other fields. This staff shortage has sometimes led to criticism of the department responsible. The creation of separate architects' departments will do nothing to remedy the position but will only intensify the competition for additional staff.

13. Local authorities may therefore be invited freely to consider whether the co-ordinating officer should be an engineer and surveyor or an architect. Hitherto he has, with rare exceptions, been qualified as an engineer and surveyor, and any proposal to depart from a practice which has worked well in the past should be examined in the light of the fact that the vast majority of the technical work carried out by local authorities is engineering and surveying, and that these subjects also form the basis of town and country planning. It should also be noted that the training and experience of local government engineers and surveyors covers much of the work included in the practice of architecture.

14. In conclusion, it is not the intention of this Institution to decry the professional work or quality of a sister profession. We do not deny that there are a number of very efficient architect's departments in the country and that these have done good work for the very large authorities. It does not follow that all authorities should do likewise and thereby upset the "all purpose" departments which are at present operating efficiently.

If you intend to place this question of policy before your council I should be pleased to supply a copy of this letter for every member of your council.

H. V. OVERFIELD, Secretary.

#### " Peterborough" Comments

"Peterborough" in the Daily Telegraph (29 Nov.) commented "The sensible attempts by Sir William Holford, president of the RIBA, to increase harmony between them and engineers make more deplorable the squabble that has sprung up between the RIBA and the Institution of Municipal Engineers, "According to the Institution's secretary, Mr. Overfield, architects are simply trying to increase their status. This seems to me a short-sighted view, Many local authorities are in serious difficulties over precisely this question.

"I heard yesterday of a Lancashire town which has £1 million worth of work held up for lack of staff. It has no borough architect and cannot get assistants because, under an engineer, the prospects of advancement scarcely exist. . . .

"Now Berkhamsted UDC is proposing that its surveyor—if he can get staff, not necessarily architects—shall design an estate of 200 houses.

"I do not know what opinion Mr. Overfield might have of this idea. But those who have seen the dismal conglomerations created in the past by officials not professionally equipped for such work will think Berkhamsted may be making a bad mistake."

#### Question in Parliament

Asked in the House of Commons whether his attention had been drawn to the list of local authorities who do not employ architects, recently published by the RIBA, and what steps he has taken to encourage them to do so, the Minister of Housing replied:

"Yes, I have seen this list and also the associated circular entitled 'The Architect in Local Government.' The list refers to authorities who do not employ chief architects; a number of them do in fact employ architects although not in chief posts.

"Within recent months I have frequently expressed my concern, both in Parliament and at meetings of local authority representatives, about the standard of design in local authority building, some of which is very good, but by no means all. I am considering whether there is anything more I can do to ensure a higher standard all round and I am taking account of the views expressed by professional bodies."

#### CUMBERNAULD IN PARLIAMENT

#### A Question of Density

A sturdy defence of Cumbernauld came from the Joint Under-Secretary of State for Scotland, Mr. T. G. D. Galbraith, in a debate in the House of Commons on November 16, when Dunbartonshire M.P.s demanded the annulment of Town and Country Planning (Scotland) (New Town of Cumbernauld) (Special Development) Order, to restore planning control of Cumbernauld to the Dunbartonshire County Council.

As the debate revealed, the new ideas which have caused Cumbernauld to be described as a "Mark II New Town," high density housing on its sloping site and pedestrian ways (described in AJ, November 24, pp. 765-9) have apparently shocked the Dunbartonshire County Council, which opposed from the start the decision that Cumbernauld should accommodate 70,000 people instead of 50,000 as originally proposed on the site. Disagreement had reached a pitch, Mr. Galbraith told the House of Commons, which had caused serious delays in the housing programme, and had decided the Secretary of State for Scotland to introduce the Order-which, as he pointed out, already applies to all New Towns in England and Wales, though not yet to Glenrothes or East Kilbride.

Mr. Cyril Bence (Dunbartonshire, East) moved the annulment of the Order, on the grounds that it was "a blow at the functions of elected bodies." "I think that the same thing should apply to the Development Corporation as applies to a private developer," he said, "There should be a local public inquiry into why there is controversy over some aspect of the planning." Cumbernauld Development Corpora-

tion had politely rejected the County Council's comments on three housing developments at Muirhead, and now the State was steamrolling them through.

"Surely it is legitimate for this county council . . . to insist that its voice is heard on what is happening in a development area such as the Cumbernauld New Town." said Mr. Bence. "Houses in that area are being built 40 ft. apart. It is a new style of development. They are separated from each other by huge wooden fences. When I first saw them I wondered whether I had, by mistake, got into the married quarters of the Highland Light Infantry. That is what they looked like to me. They are very good houses; many army officers would like married quarters like that but a great number of citizens would not like to live in them for the next 50 years of their lives. They are not attractive, although there is no difficulty in letting them because they are attractive to many people ... I can quite understand that many people from certain parts of Glasgow would be delighted with them. . . .

"The houses are developed in such a way that there is no provision for vehicular traffic of any kind. They are serviced by walks and by very narrow pavements. The idea is that in the ultimate development... the vehicular servicing will be done by means of a large arterial road system. The lay-out is wonderful." He wondered, however, whether such a scheme, costing £3 to £4 million would in fact ever be carried out: it might be stopped, and Mr. Bence remarked frankly: "This might happen just after an election—it certainly would not happen before."

Sir Colin Thornton-Kemsley (North Angus and Mearns) admitted that he had started by agreeing with Mr. Bence but had "undergone a change of mind, after finding that the procedure adopted for Cumbernauld was the same as had worked very smoothly for years in England and Wales. The Development Corporation worked under the direction of the Secretary of State, who would be in a dilemma if another planning authority, the County Council, could then appeal to him to reverse his own decisions. Mr. A. Woodburn (Clackmannan and East Stirlingshire) thought this was a "conflict of the arty-crafty people, so to speak, who come in to design a new town, with the more established views of the people who have been working on certain principles for a number of years." "When that situation arises," he said, "someone has to cut the cackle": if the county authorities had been able to take on the job of building the new town it could have been done much more economically. Close co-operation was obviously desirable between a local authority and the new town.

Mr. Thomas Fraser (Hamilton) accused the Secretary of State of trying to "put a quart into a pint pot" when he agreed to put 70,000 people in where 50,000 were originally going. He considered the houses at Cumbernauld were of low standard, and "virtually of the old back-to-back type condemned thirty years ago."

Mr. John Rankin (Glasgow, Govan), who

had visited Cumbernauld with a party of MPs recently, commented that he was not on the side of local authorities who held up the rehousing of the people of Glasgow, and had met many people in Cumbernauld who were very glad to be there and well satisfied with their houses. He could discover no objections to the layout or concept of Cumbernauld, but he did discover that there was trouble between the Development Corporation and the local authority. He quoted an instance of the Corporation having been hindered because a sub-committee of the County Council had "found it necessary to interfere in the matter of the colour of the paint to be used on the lamp-posts." He hoped the Order would result in a speeding up of the building of Cumbernauld.

Replying to the debate, Mr. Galbraith said that the ordinary system of local planning control was not designed to deal with the planning and development of a new town. 'The planning of a new town is, perhaps, more akin to those major projects in which the Secretary of State as planning Minister, requires applications for planning permission to be referred directly to him; as happens, for example, with the development of trunk roads or in the provisional National Park areas." The special provisions of the New Towns Act were designed to exempt new towns from having to get planning permission from the local authority, and these arrangements had worked very well in England and Wales.

The Order had been introduced because of difficulties over a particular scheme involving 282 houses—very similar to other projects which the County Council had approved, but which in this case they did not approve, and which threatened to retard the building programme by at least six months. "At this stage of the development of the town, when industry is expanding and the demand for homes for Glasgow families is becoming increasingly urgent, that was a very important consideration which could not be ignored."

Mr. Galbraith went on to defend the planning of Cumbernauld, taking up the question of density and privacy. The model bylaws prescribe at least 60 ft. between houses on either side of the road, but allow for a lesser distance to be approved where appropriate, he pointed out. The Secretary of State for Scotland considered that "in the circumstances of Cumbernauld-in particular, the special design of the houses and the hilly nature of the site-there is no need to insist upon uniform minimum distances. Where one row of houses, for example, is at a different level from another, quite different considerations apply from those which apply when all the houses are on the same level." He assured doubting Members that the plan for the town centre was to be carried through "much earlier than normally is possible."

He ended with this tribute to Cumbernauld: "Its plan is bold and in many respects it presents novel features . . . I agree that some people may not like them, but, if we are building a new town, I think we ought to see that it really is a new town, of the 1960 version, not the 1948 version. Certainly

the new town Cumbernauld has excited great interest and indeed admiration in many quarters both here and abroad as well as the criticism we have heard tonight. The hon. Member for Glasgow Shettleston I thought suggested, although I may be doing him an injustice here, that this town was a kind of planners' dream and that the planners would not like to live in the houses that were being built there. All I can say is that if I had to choose between living in the houses which have been built in the outskirts of my City of Glasgow and in those in Cumbernauld, I have no doubt that I would choose those in Cumbernauld."

#### **IUA**

#### Study Tour of Latin and . North America

Full details of the proposed architectural tour, under the auspices of the RIBA have now been issued, and anyone wanting to join it who has not already applied must do so, to the Secretary, UK Committee of the IUA, 66, Portland Place, London, W.1, before December 15.

The party will fly from London airport to Rio de Janeiro on February 22, and from there visit Brasilia, São Paulo, Caracas, Mexico City and New York, returning from this last on March 14.

The purpose of the tour will be to study the many interesting developments in architecture, and especially town planning, to be seen in South America, but the historical legacy, especially of Mexico, will not be ignored. The party will also be given opportunities of meeting architects in each of the centres visited.

The cost of the tour, inclusive of accommodation and breakfast, will be £492, plus a single room supplement of £28: although this figure may be substantially reduced if demand warrants the chartering of an aircraft. The Agents responsible for travel arrangements are prepared to offer special extended credit facilities over a period of 12 months, if these are required.

#### MOE

#### Italian Schools Delegation

A delegation of eleven Italian MPs, civil servants, architects, engineers and educationists arrived in London last Thursday at the invitation of the Minister of Education, and is to spend ten days looking at British schools.

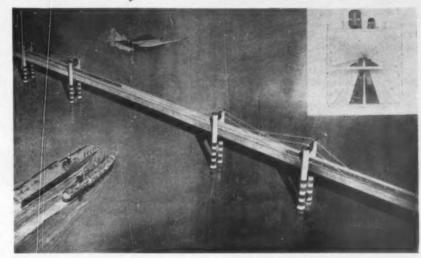
The visit is the result of the success of the British primary school shown at Milan this year, which has provoked in Italy a wish to know more about British school design and the methods which have enabled Britain to provide over 3 million new school places since the war which combine high quality with low cost. A large scale school building programme is being planned in Italy.

The delegation is particularly interested in our prefabricated systems of school construction, especially the C.L.A.S.P. system, and is visiting C.L.A.S.P. schools in Nottinghamshire and Coventry.

The Anti-Uglies have not so far criticised

#### CHANNEL BRIDGE

#### Tunnel in the Sky



Sir Owen Williams's Channel bridge, with section showing double deck tunnel road inside and rail or road on top

Sir Owen Williams's proposed design for a bridge across the Straits of Dover. Nor, for that matter, has the Ministry of Transport, But no doubt both would do so long before this project came at all close to fruition.

The bridge would be essentially a box girder structure of roughly 50 ft. by 50 ft. section. Road traffic would be carried on two decks, inside the steel box—the sides of which would, however, be perforated. The top of the box—exposed to the elements—might carry either two railway tracks, or alternatively (and Sir Owen seems to have little faith in the future of railways) a third roadway which could be used to carry peak traffic flows in either direction.

Sir Owen is no doubt right in maintaining that a bridge of some kind would give greater scope to the development of road traffic across the channel than would be the tunnel proposed some months ago—a purely rail tunnel through which cars and lorries would be transported on special trains, as they are through the Alpine rail tunnels. He points out that, if you're going to build a bridge anyway, you can make it double the width at little extra cost—whereas increased cross-section adds greatly to the cost of a tunnel.

He proposes that each deck should have two traffic lanes, both flanked by "shoulders" for emergency parking. This width would doubtless be ample for all time. But it is odd that Sir Owen should claim the bridge would have a capacity of 12,000-15,000 vehicles per hour, considering that the capacity of a motorway lane is usually taken to be a mere 1,500 v.p.h., even with vehicles following each other in a steady stream. (The DAILY capacity of a four-lane motorway is usually taken to be about 35,000 passenger cars.)

If we're going to have a bridge, however.

would it not be pleasanter to drive across on a graceful suspension bridge like the one across the Mackinaw Straits, open to the sky, rather than cooped up inside a steel box (albeit perforated)—a sort of tunnel in the sky? (Incidentally, the Mackinaw Straits Bridge was specially designed, after exhaustive wind tunnel tests, in such a way that it would offer the minimum resistance to the winds; Sir Owen's design seems to be its exact antithesis in this respect.)

Sir Owen claims that his bridge would cost only £175,000,000 to construct—compared with £125,000,000 for the proposed rail tunnel. However, it will be recalled that the cost of Sir Owen's other brain-child—the M1—rose from an estimated £12,500,000 in 1955 to an actual £21,500,000 by 1959. With the same ratio of estimated to final cost, the final cost of the bridge might be around £300,000,000. Of course, the same ratio might well apply equally to tunnel costs.

It might be worth it. But I doubt if the Ministry of Transport would ever consent to any kind of channel bridge, since the piers—some of them only 600 ft. apart in Sir Owen's scheme—would, even in these days of radar, present a considerable hazard to navigation. Proponents of an earlier bridge scheme claimed that, if a ship collided with one of the piers, the bridge would remain intact; but they said nothing of the fate of the ship.

But it is probably a good thing that the "bridge versus tunnel" argument should rage for a year or two—during which the hovercraft will quite possibly show real promise of providing a cheaper and equally satisfactory solution of the "cars across the channel" problem than either bridge or

NIGEL SEYMER

#### LCC

#### Report of Scientific Adviser

The report of the L.C.C.'s Scientific Adviser for 1959\* which has now been published, makes a number of interesting points.

Flat Roofs. The L.C.C. find that mineral surfaced bitumen felt used on flat roofs needs a surface bitumen dressing, followed by a layer of bonded chippings after about five years' exposure and will need treating again after 10 or more years. For this reason the Council find that asphalt is cheaper.

Floorings. Experiments on p.v.c floors have shown that charring from stubbed out cigarette ends can be reduced by raising the filler content. P.v.c. floors have greater resilience than linoleum and for this reason should wear longer, but linoleum is still

the best value for money.

Sanitary Ware. Provided the cross-section is not diminished excessively, vitreous porcelain sanitary ware is more satisfactory than

fireclay or other porous body.

Insulants for under-floor heating. Experiments using foamed polystyrene and mineral wool quilt as insulators in under-floor electric heating showed that foamed polystyrene was the better of the two, directing 60 per cent of the heat generated in the floor upwards when mineral wool quilt directed 50 per cent of the heat upwards. Both of these give a sound insulation which well exceeded the requirements of Grade I for flats. Double Glazing and Weather Stripping. Experiments on living rooms have shown that the heat loss through excessive air change was greater than the heat saved by double glazing. A double glazed window 19 ft. square showed a saving over a single glazed window of the same area of the equivalent of 66 watts an hour. The amount of heat loss by two air changes was approximately equivalent to 500 watts an hour. Since it is common for leakages round window sashes and doors to account for two to three air changes per hour in living rooms, it is considered that the reduction of such leakages, possibly by weather stripping, would save more heat than double glazing.

#### GLASGOW PROJECT

#### Housing Estate at Cawder

A £4 million project for building a housing and industrial estate at Cawder, north of Glasgow, by a group of private developers. for whom Sir William Holford has agreed to act as consultant, will require planning permission from three Scottish county councils and Glasgow Corporation, since it impinges on Glasgow's green belt.

The estate covers 5,000 acres of land, which includes three golf courses, but already carries a fair amount of industrial and residential development, and in a statement the main developers, Lendon Merchant Securities, say that "it is now intended to produce comprehensive proposals embracing the entire estate and incorporating in a coherent form the various activities already represented."

Published by the London County Council, The County Hall, Westminster Bridge, S.E.1. Price 1s. 3d., postage extra.

A comprehensive scheme was prepared for the area just before the war by Professor Patrick Abercrombie, but the outbreak of war prevented its being carried through.

#### SOCIETY OF **BUILDERS' MERCHANTS**

#### Attack on Fixed Price Contracts

An attack on the fixed price form of contract, the RIBA form of tender and "the ever rising cost of tendering" was made by the President of the SBM, Mr. A. L. Prickett, at the annual meeting of the Society last month.

"In view of the recent substantial increase in the price of coal and new national wage awards, plus the possibility of shortages of materials, I strongly suggest that members should not accept fixed price contracts where long periods of cover are required," said Mr. Prickett, "unless they add a substantial surcharge to their prices or unless manufacturers are prepared to accept responsibility."

He had always considered this form of contract as "singularly unfair."

On the RIBA form of tender, Mr. Prickett said the Society had heard of numerous cases where this had been amended to cover a guarantee by the nominated supplier of goods for "x" months after completion of the main contract, as opposed to the more usual guarantee to cover latent defects for six months after delivery. This amendment could not be acceptable to the merchants. he thought, since in the case of a large contract completion might be a year or more after the goods had been supplied. and the nominated supplier clearly should not be called upon to grant such a guarantee when he has no possible control over site or storage conditions on the job.'

He suggested that a joint meeting should be arranged with the RIBA, the Royal Institute of Chartered Surveyors and the Master Builders' Association, to see if they could co-operate on "this vexed problem."

#### CIVIL ENGINEERS' COMPETITION

#### Charles Hawksley Prize, 1961

This prize, which has been awarded annually since 1922, is for a design which combines artistic merit with excellence of engineering design, and the Council of the I.C.E. are urging as many of their young members as possible to compete for it. Entrants for the 1961 award have the choice of designing a cooling tower in reinforced concrete or a thin shell roof. Closing date for entries is March 31, 1961. Judges are the Presidents of the I.C.E. and the R.I.B.A., jointly. The competition is open to all corporate and non-corporate members of the I.C.E. under the age of 30.

#### BRIXTON SCHOOL OF BUILDING

#### Communications in the Building Industry

One of the matters which concerns the Management Committee of the RIBA is the problem of communications in the building industry. It would appear from the discussion organised at the Brixton School of Building recently that they have not gone very far along the road to solving it. R. Baden Hellard, who is a member of the Management Committee, was one of the three principal speakers at the discussion and he gave a lucid account of what communications mean.

From the viewpoint of the architect, as the leader of the building team, the term "communications" means methods whereby his intentions are conveyed to those whose task it is to translate them into reality. Before the RIBA is in the position of publishing standard documents and a manual of office practice for the use of its members it needs to survey the field and establish precise requirements. A necessary exercise is to enlist the support of the profession by getting them to send in samples of the documents used in their own offices. This the Management Committee has done and, apparently is still doing. At the last Building Exhibition the RIBA mounted an exhibition of the documents used by half a dozen prominent offices in this country. This exhibition has since travelled around England and last week provided the background to the discussion at the Brixton School. It was interesting to see how some of the better organised architects tackle their own communications problem and a little alarming to see such a variety of paper sizes.

Mr. Baden Hellard and his fellow speakers, W. James, a quantity surveyor, and H. J. Cruickshank, a builder, painted a sobering picture of the difficulties with which we are beset as the result of indifferent communications. But the highlight of the evening was when the meeting was thrown open to general discussion and Dargan Bullivant from the floor asked each of the speakers a question. He asked Mr. Baden Hellard whether he thought that the architect could be satisfied with the way information was presented to the builder in the form of drawings, bill of quantities and specification; he asked Mr. James if the quantity surveyor could be satisfied with the form in which information was provided in the bill; and he asked Mr. Cruickshank if the builder could be satisfied with the drawings and other information he got from the architect. The answers, inevitably, were no, no and no, but none of the speakers found himself able to indicate the exact way in which changes and improvements could be made. The chairman, C. M. Crichton, in summing up, said that architects, builders and quantity surveyors must get together and make a combined attack on the prob-



# S. S. Oriana

of the P & O-Orient Line

Naval architects: Austin Kelly, R. V. Turner for Messrs. Vickers-Armstrongs (Shipbuilders) Ltd., and C. F. Morris for the Orient Line.

Architects—public rooms: Design Research Unit, co-ordinators and part designers with Ward and Austin, Brian O'Rorke and R. D. Russell and Partners; consultant, Brian O'Rorke. Cabins: R. D. Russell and Partners. It shows at least perseverance that when people are wondering whether the day of the large liner is nearly over, British architects are proving themselves capable of designing them. The enlightened client is, of course, Sir Colin Anderson who alone has given a lead in ship interior design in this country.

has given a lead in ship interior design in this country.

S.S. Oriana started on her maiden voyage last week to Australia and San Francisco. She can carry up to 2,184 passengers (638 first class, 1,496 tourist class) and a crew of 900. Her length overall is 804 ft., beam 100 ft., gross tonnage 41,922, and her cruising speed is 27 knots. The round trip takes 100 days and single fares to Sydney range from £155 to £215 (tourist) and £275 to £865 (first class). The Oriana is fitted with stabilising fins and transverse propulsion units so that she can dock, if necessary, without the aid of tugs. (Four tubes, with a central electrically driven impeller in each, run athwartships and draw in water one side and expel it on the other.) The approximate total cost of the Oriana was £14m.

The ship's external appearance, at least to the layman, is fairly orthodox. An aluminium superstructure has proved light enough to allow an extra deck to be added. Both mast and smoke stack are nearvestigial, as is usual today; being fully air conditioned the decks are clear of ventilator cowls and the foul air is emitted through the second "funnel". Deck areas are reasonably spacious, but, except at the stern, always surrounded by glazed bulkheads to break the uncomfortably strong winds caused by travelling at over thirty miles per hour. Windbreaks do, in fact, give the superstructure a rather untidy appearance. Lettering and details are neat, in the nautical manner (below left). The lifeboats are of polyestre glass fibre and are carried in an underdeck position, special davits having been designed to allow this. The boat deck is one hundred yards in length, and forms the longest promenade. The days of passengers walking round and round the ship's decks are over. Below right, the boat deck. Note its freedom from clutter.



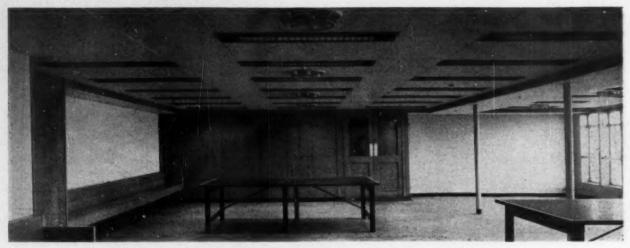
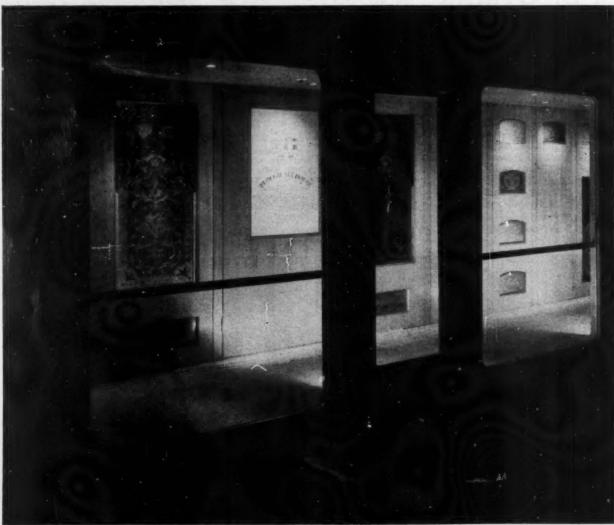


TABLE-TENNIS ROOM

As is often the rule in ship interiors, the less the interior is consciously designed (which normally means over designed) the more successful it is. The table-tennis room, above, may be too bleak for most tastes, but it is the hard, bare and fundamentally sound bones of nautical design. By contrast, below, is a light-hearted, floating



PASSAGE

hotel design-gamble which does not succeed. Engraved glass panels line the passages leading to a bar. They have been preserved from the Plough pub at Notting Hill. The door, centre, bearing the name, leads nowhere. The bar itself (see page 829) is somewhat of an anticlimax. (Architects: DRU.)



The entrances, alleyways and stairs in the *Oriana* are all simple and ship-like. Typical of the neat detailing is the tourist purser's hall, above left. Stair half-landings, above right, do not touch the rear wall and the gap

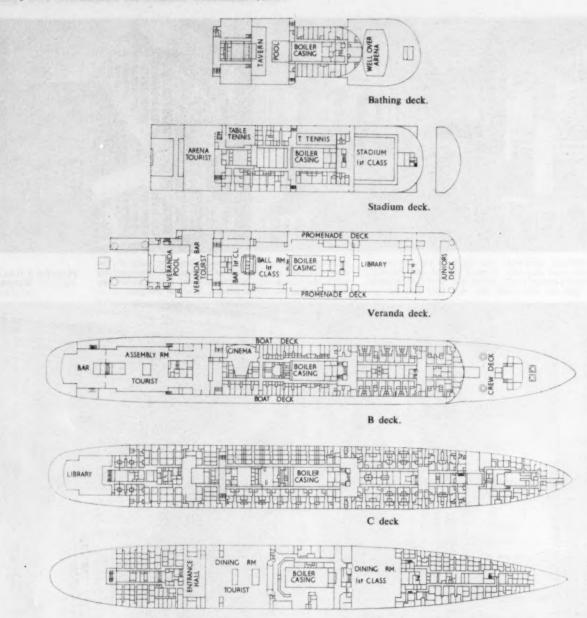
is emphasised by strip lighting along the edge of the floor slab. The moulded top of the handrail unfortunately turns the wrong way to give a good handgrip. (Architects: first class, DRU; tourist, Ward & Austin.)

PURSER'S HALL STAIRS

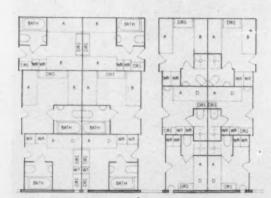


An innovation in the planning of cabins is shown above left. Six cabins are grouped in staggered formation (see plan overleaf) round a wider-than-normal alleyway. At the end is a fairly large porthole, and each cabin has a vertical slit window which borrows daylight from it. All cabins are air-conditioned, those on the outside

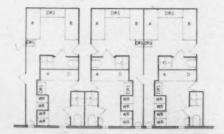
having portholes as well. Above right is a typical alleyway. A slatted ceiling, in hinged panels, conceals the services (and may prove hard to keep clean). Not discernible are the "Vs" inlaid in the floor, of a different colour for each deck, which point towards the bows and therefore make route identification for passengers relatively easy.



E deck



The court-yard planning of cabins which enables a larger number of cabins to receive a little natural light and some outlook without recourse to the extraordinary contortion of the Bibby plan shown right. Note how bathrooms are placed on outside walls and the untidy placing of so-called built-in furniture. A selection of the fourteen deck plans, indicating the position of the main public rooms. First class accommodation is in the forward part of the ship and tourist aft.



DRS drawers
DY dressing table
WR wardrobe
WT writing table
washbasin
D w.c.

b wc.

hower

A & B bed or lower I

upper berth

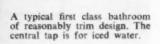


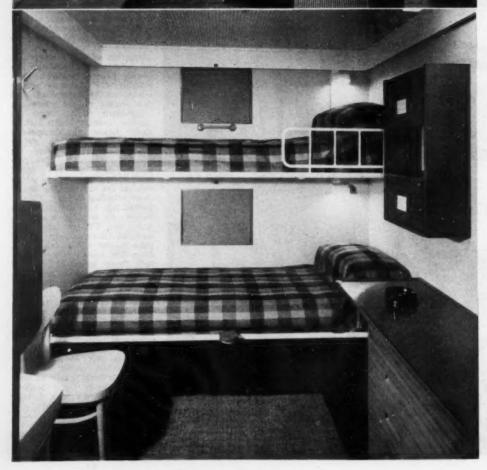
#### CABINS

Cabins range from a comfortable minimum to the over opulent. Although the planning of cabins continues the Orient Line's tradition of steady improvement, the improvement is not so marked as one would expect, bearing in mind that architects were employed. The economics of passenger liners no doubt accounts for the minimal planning, but the irregular, "bitty" layout of the furniture suggests conservatism on the part of owners and shipbuilders, particularly as regards building-in the furniture. It is significant that the major planning decisions on the number and types of different cabins and the major policy decisions on ventilating and other services, which radically affect the detailed planning, were made before the architects (R. D. Russell & Partners. Partner in charge: lan Hodgson) were called in. A surprising action on the part of the Orient Line.

of the Orient Line.
The fitting of furniture into a ship is far more complex than fitting furniture into a building because of the absence of rectangular planning. The ship's sheer and camber and plan form mean that every unit has to be, in part at least, purpose-made or purpose-fitted. In view of this draw-back, and bearing in mind that the cabin accommodation is the guts of a passenger ship, it is surprising that no very obvious attempt to rationalise this problem has been made. An problem has been made. An inspection of the photographs of cabins on this and the following page demonstrates how untidily the minimum cabin equipment is assembled and how many of the items are tailor-made to fit. Note the clumby cornice duets which tailor-made to fit. Note the clumsy cornice ducts which drop below the suspended ceiling and lead to switch points, the recess over the wardrobe (so useful for life-jackets) and the odd lights, shelves, and plug points which confuse the interior. The equipment standard is high. Tourist cabins, left, have at least washbasins and some have showers and a w.c. The low (sound absorbent) ceiling enables the air sorbent) ceiling enables the air inlet to be easily controlled. Most first class cabins (bottom left) have baths or showers and w.c.s, telephones and loud-speakers (with wireless pro-grammes on tap). And all first class cabins can be fitted with microphones which, plugged to a telephone socket, will cause a warning light to flash on the warning light to flash on the telephone operator's switch-board if a child cries. Parents are thus able to leave their cabins. The colour schemes have been kept "cool" as most of the voyage is in tropical waters. Inboard cabins, without daylight have a different colour. daylight, have a different colour scheme from those outboard. Walls are covered with p.v.c. Drawers in the chests are lined with plastic sheet which un-fortunately shows the dirt.

CABINS





A typical crew cabin. There are no crew dormitories on the Oriana. All are two-berth, and the finishes are identical with tourist cabins, a considerable improvement in standards.

There are eight extra large first class cabins and one flat (two views, right) which is on the stadium deck. It consists of entrance hall, box room, pantry, bedroom, bathroom and dayroom, part of which can be used for dining. The joinery and furniture are all made of yew wood, the red-brown and cream grain of which produces an almost too lush effect. At this height above the water line the windows can be large and one wall is nearly all window. The walls are padded in white leathercloth. The easy chairs are upholstered in purple wool, the curtains are purple and lilac cotton.





The officers' cabins are much the same as first class passenger cabins. Right is the dayroom of the chief engineer. All cabins have been designed by R. D. Russell & Partners.





PLAYROOM

The children's playroom (first class). Bulkheads are faced with elm and grey and blue plastic faced panels (decorative panels: Robert Perritt). The ceiling is part teak, part ribbed acoustic board and follows the double curvature of the deck head. The climbing frame, with

timber sections rather too large for a secure grip by children's hands (designer: June Lyon), a slide and a "bridge" are the fixed equipment. In the foreground is an area for quiet activities. (Designed by DRU.) The Lookout, on the Stadium deck, has fine views for-



STADIUM LOOKOUT

ward, a bar, television and a small exhibition about the ship (by R. Armstrong and Collis Clements). The bulkheads are in cherry wood veneer. (By DRU.) After the simple functionalism of deck space, circulation areas and cabins (though there are exceptions here) owners and architects tend to start pulling out the

design stops and aim for shattering flamboyant visual effects in the public rooms. Despite all the money, effort, fabric, colour, exotic veneers, gilding and lighting, the result is often not so exciting as the ship interior when left largely "as found" so that sheer, camber and hull lines can be read through the surface treatments.





Obviously luxurious. but with the ceiling treatment still reminiscent of a ship's deck, is the Silver Grill room for first class passengers, left. With bar and dance floor it can be used for private parties or by passengers who want food other than that supplied in the restaurant. Walls are of grey sycamore with ebonised trim. The

panels between the alcoves are coloured orange and the carpet is three shades of brown. (By DRU.) The window-less Red Carpet room is for special functions and is equipped with record player, tape recorder, television, piano, slide projector and screen, and a portable altar. Walls are olive ash with incised gilded line. The

SPECIAL ROOMS



. . . carpet and Middleditch's sunflower painting are of such strong scarlets and oranges that the room glows hot with colour. There is nothing to suggest that one is on board ship. Here is an expensive refuge for the seasick. (By Ward and Austin.)

FIRST CLASS BALLROOM

The first class ballroom is one of the least ship-influenced of the major rooms and correspondingly the least successful. Ceiling and walls are broken up by changes in plane and panels of colour so that the whole effect is restless. This disruption is largely lost in a photograph. (By Brian O'Rorke.)



FIRST CLASS DINING

The first class dining room does not photograph well. Its actual appearance is luxurious, but not excessively so. With rosewood panelling, scarlet hide upholstery, red and black linoleum floor and curtains of pink, scarlet and dark orange the total effect could have been overpowering if the detailing had not been kept neat and

simple: see the hot cupboards and servery detail, opposite page. The aluminium relief is by Geoffrey Clarke. The central gilded light fitting is a brave but not successful attempt at crystalline ornamentation (by R. Y. Gooden.) The problem caused by the low ceiling heights in ship interiors is satisfactory lighting without



FIRST CLASS LOUNGE/ LIBRARY

The first class lounge/library is another successful design, though the nautical influence is slight. The very bold ceiling pattern is too disturbing for visual comfort, particularly when seen from the side. In order not to emphasise the low height of the ceiling the chairs are also low, except for one group with high backs in

the centre. These latter are likely to be the most popular in the ship, because they are the only chairs in which it is possible to rest one's head. Walls are of macassar ebony, with panels of moss green leather; ceiling, olive ash and white acoustic board lighting troughs, chairs black and pale olive, curtains orange. The painting



glare. The fault in this room is the degree the lights project below the ceiling. If they had finished nearly flush with the ceiling a certain desirable sparkle might have been achieved without so much glare. (By R. D. Russell and Partners.)



which conceals the library in the background is by John Piper. The architects, DRU, have carefully avoided fussy detail, such items as writing tables being neatly handled, see above.







Top, right, first class galleries, by Brian O'Rorke, lie either side of the boiler casing on the veranda deck and lead to the ballroom. Panelling elm, curtains lime green, upholstery red, carpet lavender grey and green. Centre, the Plough Tavern, by DRU, somewhat an anticlimax after the build-up (see page 820) but a straightforward ship interior. Beyond the doors is the bathing pool. Floor, white mosaic, ceilings and walls, cedar. Bottom: ergonomic stainless steel cutlery by Robert Welch, proved efficient and comfortable to use except for the fork which tapers towards the end, where it should more logically widen to spread the load on the palm. The china is by R. Y. Goodden, and a rather dull menu card (white leaf pattern on terracotta and turquoise) by Lynton Lamb.



TOURIST

The failures in design of the public rooms of the Oriana are few, and are due, it would seem, largely to the effort required to make first class look first class. In the tourist class, where the designer has been more relaxed, where the fact that the rooms are within a ship can be allowed to intrude more obviously, the rooms are more success-

ful. This is not denying the fact that the first class rooms are better than all previous British ships and comparable with the best of foreign ships of this type. Above is part of the tourist library, by DRU. The colour scheme is subdued and restful: grey carpets, dark green linoleum, green and black chairs (rather too low, and mannered)



TOURIST LIBRARY BOOKSTACK and a great sweep of blue-green curtains (by Barbara Bennett) covering at night the large windows. The library, with writing tables, runs round three sides of the central book stack, shown above, where the ceiling of ash

boards drops to under seven feet, but is more dramatic than oppressive. The engraved glass panel at the end is by Laurence Scarfe. The library is only partially screened off.



The stern gallery is another large sitting room, divided in two by a decorative glass "screen (designer: Stefan Buzas). The walls are of Indian Laurel and aspen panels and lime green leather cloth. The plain aspen ceiling has six slots for artificial lighting but is otherwise splendidly plain, which is important when, with a low ceiling height, it is so intrusive. The carpet is mustard coloured, seats grey-green and orange hide (by Terence Conran). Another view is shown overleaf. (Architects: DRU.)

STERN GAL\_ERY







Top left, one of two sitting rooms off the Purser's Hall. The bulkheads and ceilings are panelled in elm. Writing tables are black. Upholstery is in grey, white and various brown stripes, (Designed by DRU.) The tourist ballroom on B deck, above left, by Ward and Austin has recourse to the usual ceiling troughs in order to relieve

the low ceiling height. Circled by multi-coloured lights the orange domes are reminiscent of earlier modernistic ship interiors. The bar, right, also by Ward and Austin, has a series of tables with tops of illuminated stained glass mosaic by Brian Milne. This is a rich detail which at times may glow rather too strongly.

SITTING-ROOM BALLROOM BAR



TOURIST RESTAURANT

A visitor described the tourist restaurant as a very good canteen. There is an element of truth in this, in that it seats 784 at one sitting, but the implied criticism is not fair. Walls are Indian silver grey wood and beige leather cloth. Ceiling lighting is either recessed strips or the dropped fittings shown above which are too

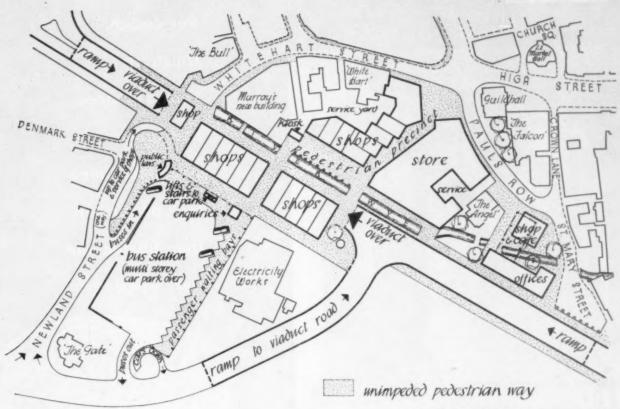
glaring. It is a pity that table lights could not be used (the tables are, of course, fixed). The room is divided into small areas, partially screened from each other and this is emphasised by contrasting upholstery colours, green, turquoise and a rather unpleasant brown. (Architects: Ward and Austin.)



STERN GALLERY

Finally, we show another view of the tourist stern gallery, on B deck, a truly nautical room with fine large raking windows, high above the water, giving a splendid view aft. It is obviously a part of a passenger ship, and there has been no attempt to disguise it as an hotel.

As the hazards of travel by sea are negligible such deceits to console the passenger are surely no longer really necessary. In this room the tourist can easily recognise the lines of sheer and camber and appreciate a voyage to sea.



Sketch plan of the scheme at ground level

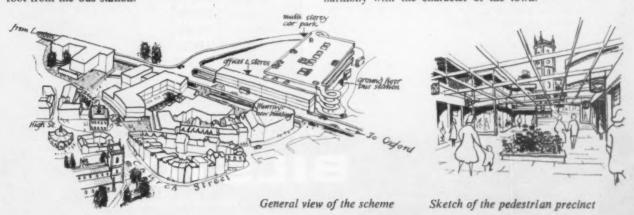
#### Central Redevelopment at High Wycombe

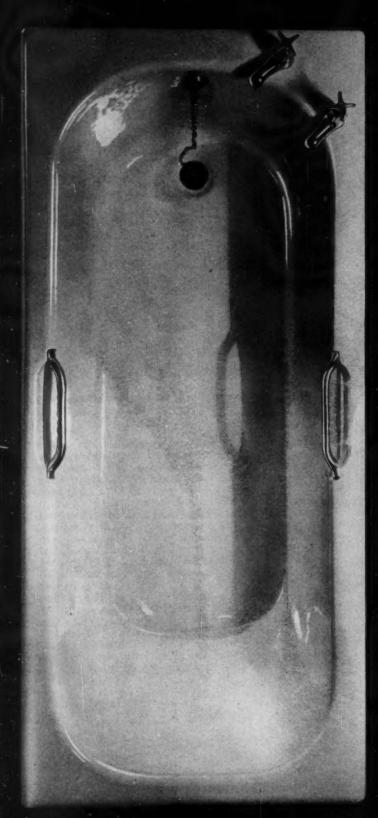
This scheme, prepared by Fred Pooley, Buckinghamshire County Architect, has recently been accepted by both High Wycombe Borough Council and the County Council.

The basis of the scheme is complete separation of pedestrians from vehicles. Putting the vehicles on a road above ground level has allowed the whole ground floor area to be developed for unimpeded pedestrian flow. The scheme fully recognises that central area redevelopment proposals, particularly those for smaller local authorities, must to a large extent be financially self-supporting. For this reason the overhead road has been kept at as low a level as possible, and it is proposed to develop the space under it for shopping. Two pedestrian avenues under the viaduct carrying the inner

Two pedestrian avenues under the viaduct carrying the inner relief road allow free flow for people on foot between the two parts of the town. The River Wye, which crosses the central area, has its banks lined and planted as a town centre amenity. A former proposal for a link road from the Guildhall to the inner relief road has been deleted, thus freeing an area for a further shopping precinct readily accessible on foot from the bus station.

Depending on the detailed layout adopted the bus station can accommodate between 30 and 50 buses. Above it is a multi-storey car park in reinforced concrete for about 400 cars on three floors. It is hoped to develop further car parks serving the area, to provide for about 1,500 to 2,000 cars. The shops under the viaduct have storage space over, which is served directly from the raised relief road. Above this level are two more floors which may be used as offices or for extra storage. It is hoped that the car parking facilities will help to make the offices attractive to industrialists. A good deal of thought has been given to the visual effect of the proposed development on the existing town scene. It is essential to preserve the character of High Wycombe and to ensure that the new shopping area harmonises with it. The existing High Street is successful because of its width in relation to the buildings which front on to it; and the River Wye, where it has been landscaped by the Borough Council adjacent to its offices, is very beautiful. The new scheme, properly designed and incorporating the river, can be brought into harmony with the character of the town.





finish...
choice of sizes
and colours,
Architects need
look no further
than Bilston, the
Bath Specialists



CRESTA
MARINA
MERMAID
BERMUDA
PRINCESS

BILSTON

Illustrated literature sent on request . Bilston Foundries Ltd : Bilston : Staffs

#### THE INDUSTRY

This week Brian Grant describes a small refrigerator, coloured roofing and siding, booklets on glass-reinforced plastics, a window conversion kit, and transistor lift controls.

#### New Small Refrigerator

Kelvinator have just announced a new small refrigerator with a capacity of 3 cu. ft. and selling at £52 10s. which will be available from the beginning of next year. The price includes brackets for wall fixing if required, and for building in there is a stainless steel fascia plate with grilles top and bottom, though this is naturally extra. The freezing chest can be adjusted to any temperature between 0 and 5 deg. F., and the makers claim that frozen foods can be kept in good condition for up to three months. Cabinet dimensions are 19 in. sq., with a height of 34% in. (Kelvinator Ltd., Chiswick Flyover, Great West Road, London, W.4.)



Kelvinator 3 cu. ft. refrigerator

#### Roofing and Siding

The Robertson range of coloured Galbestos introduced just over a year ago has been extended to include a number of new pastel colours. Shades of green, grey, red and blue are now available, and are shown in a new leaflet G115A.

Used principally for the cladding for walls and roofs of industrial buildings, colour Galbestos can also be employed in the manufacture of ventilators and flashings, so that they may be the same colour as the rest of the building. The colours are not applied to the surface like a paint, but are part of the thick weather-proof coating which is applied as part of the protective process to one or both sides of the sheet. In addition to the colours an extended range of profiles is available. Roof decking units can also be supplied in colour, and when the insulation is applied externally the inner face can be left as a permanent coloured finish which should need no maintenance. (Robertson Thain Ltd., Ellesmere Port, Wirral, Cheshire.)

#### Glass Reinforced Plastics

Industrial designers will certainly be interested in a series of booklets on glass reinforced plastics which have just been issued by Fibreglass Ltd. The first deals with the different types of fibre produced, and their uses, and the second with moulding techn'ques, design and methods of fabrication. while section 3 covers physical properties and also contains lists of suppliers of fibres and resins. Section 2 will be most useful to the designer, as the various moulding techniques are clearly described and there are also some useful design notes. The booklets have been published in separate parts because of the very rapid changes in both methods and suppliers. (Fibreglass Ltd., Ravenhead, St. Helens, Lancs.)

#### **Modifying Casement Windows**

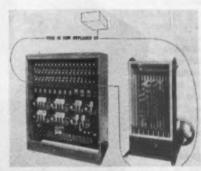
A Newcastle firm is now marketing kits for converting standard casement windows into fully rebated vertically centre pivoted types. Each kit contains all the necessary timber ready machined and needing only to be cut to final length, swivel plates and all screws and nails. The result is naturally a little clumsier than purpose made jobs, but the kits are intended for the do-it-yourself

market, and architects may care to know about them. Similar kits are produced for converting fanlights. (DEB Products Company, Hancock Street, Barras Bridge, Newcastle-on-Tyne 2.)

#### Transistors for Lift Control

The new equipment developed by J. & B. Hall is believed to be the first application of transistors for the control of lift operation. Until now, the installation of control equipment has been awkward because of the bulk and weight of the units. Furthermore, with a mechanical selector, there is little choice regarding the position occupied by it. In the new equipment both these difficulties are overcome. The control unit is small, light and easy to install and its position in relation to the remainder of the installation is not dictated by mechanical requirements. It can, therefore, be placed in the best position for ease of installation and accessibility. On the accompanying illustration, the outline shows the size of the electronic control panel in relation to the current type of control and indicator boards performing equivalent functions. Approximate dimensions of a transistor control unit for eight floors are 121 by 6 by 18 in.

The static switching unit contains no moving parts whatsoever, its operation being entirely electronic. By eliminating relays, with their numerous contacts, maintenance requirements are reduced virtually to nothing. The functions of control and selection are combined in a single unit, which is entirely enclosed and dustproof. (J. & E. Hall Ltd., Dartford, Kent.)



Space saved by J. & E. Hall lift control

THE ARCHITECTS' JOURNAL for December 8, 1960

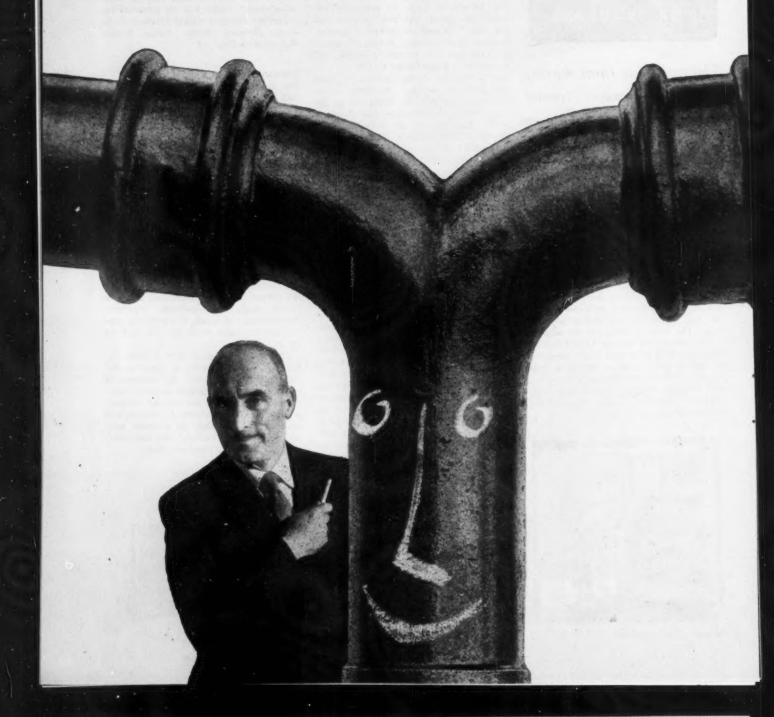
MR GRANT ADDS THE HUMAN TOUCH our Mr. Grant is an artist at his work. So are his eight fellow pipesmen. One of them will be your personal contact when you come to us for cast iron rainwater, soil and drain goods. You will get to know him well and will find that when he says "I'll see to it right away, Old Chap" he means it. And when you send drawings in for study by the Allied Advisory Service, he will see that you are informed as to what pipes would best suit your needs and will arrange supply through your merchant. Mr. Grant and his colleagues are dedicated men. Dedicated to the solution of individual problems. For area 1 phone Stockton 85291; for area 9, Falkirk 2441; for all other areas phone Wellington (Salop) 510.





rainwater and soil goods division of ALLIED IRONFOUNDERS

KETLEY WELLINGTON SHROPSHIRE



# INFORMATION CENTRE

A digest of current information prepared by independent specialists; printed so that readers may cut out items for filing and paste them up in classified order.

725-5

#### 10.199 design: building types HOSPITAL THEATRE FLOORING

Conductive Flooring for Hospital Operating Rooms. T. H. Boone, F. L. Hermach, E. H. MacArthur, R. C. McAuliff. Price 20 cents, obtainable from US Government Printing, Washington 25, D.C.

This admirable and highly technical report published by the US National Bureau of Standards defines clearly and concisely the properties required of an efficient nonconductive floor and attempts to determine the standard of efficiency attained by various materials now on the market. The authors have measured the electrical resistance of several flooring samples, and have carefully assessed the effect of all the pertinent factors that might affect the resistance of each sample, such as wear, ageing, moisture and maintenance. The investigation compares the significant physical properties of each sample with those of non-conductive floors of the same type. Since these tests were not confined to laboratory conditions but include field surveys as well, the results may be considered of especial value to practising architects. The results obtained apply not only to hospital operating room floors but are valid for other locations in which the elimination of electrostatic hazards is essential, e.g., munitions plants and munitions storage depots.

Unfortunately the authors deliberately decided not to undertake tests to determine the relative differences in the germ-free properties of the various samples they chose to study. However, within their prescribed field their research is extremely thorough.

Brief descriptions of the composition and installation techniques of each of the conductive floors tested are given. These floors include varieties of ceramics, plastics, concrete, latex, linoleum, terrazzo, rubber, and vinyl.

The changes that occur in each sample due to age or to applied voltage are presented in graph form, whilst the results of ambient relative humidity are tabulated for easy comparison. Sections of the report deal with methods of measurement and the types of instruments used. These sections are unlikely

to be of interest to the architect unless he possesses a scientific mind, but the inclusion of such data should not deter the less scientific from reading this pamphlet, for it also contains detailed notes on the non-electrical properties of floors. These include indentation characteristics, scratch resistance, slipperiness, scrubbing durability, water absorption, stain resistance, and stain removal.

Photographs accompany the text and a bibliography is included.

D 620 · 1

#### 16.130 materials: miscellaneous FIRE RESISTANT MATERIALS

Sponsored Fire Resistance Tests on Structural Elements. H.M.S.O. 7s. 6d. net.

This recently published book has not received the notice in the technical Press that it deserves.

The Joint Fire Research Organisation already renowned as an organisation based on co-operation between D.S.I.R. and the Fire Officers' Committee has, in publishing this book, made history again by securing the co-operation of those manufacturers who are developing satisfactory fire-resisting elements of structure to meet post-war building needs.

The first six pages are, in effect, a miniature text-book on the nature of tests for fire resistance, on the behaviour of concrete, steel, timber and other materials under fire conditions and on constructional factors which influence this behaviour. This section of the book should be read by all architects and surveyors who have not previously studied the subject.

The body of the book contains a description of 81 fire-resisting walls, floors, suspended ceilings, columns, a window and a rooflight, all of proprietary design or incorporating proprietary methods of fire protection A drawing and the results of fire behaviour tests are given in each case. This is an extremely useful summary of non-traditional forms of construction developed in the main since the war. A point of interest, particularly to maintenance surveyors, is the fact that some of these new techniques can be carried out with only a saw and a screw-driver.

The index may be regarded as a supplement to the traditional fire-resisting elements of structure already listed in the 4th Schedule to the Model By-Laws Series 4, Buildings (1953 Edition); in M.O.W. Post-War Building Study No. 20 "Fire Grading of Buildings"; in National Building Study Research Paper No. 12, Part V "Fire Tests on Structural Elements"; and in National Building Study Bulletin No. 13 "Fire Endurance of Timber Beams and

A footnote on the contents page states that supplementary data sheets will be published at intervals. It is to be hoped that the scope will be extended to cover fire-resisting doors and roofing materials tested for resistance to external fire exposure.

747

#### 28.25 miscellaneous INTERIOR DESIGN

Decoration and Furnishing by John Wilson, A.R.C.A. (Batsford 63s.)

The purpose of this book, the Foreword says, is to explain principles and provide practical information without competing with publications dealing with decorating and furnishing fashions and ideas.

The principles set out are basically sound but are lacking in overall scope. The combination of architect, interior designer and artist acting in unison at the outset of a new project, which is common on the Continent and not unknown here, is not mentioned. The implication is that by the time the decorator is given his chance, the damage is done and it remains for him to do the best he can. The principles also tend to relate to small scale areas and do not give sufficient guidance on the treatment of large areas except indirectly.

These omissions are no doubt the result of the interior designer being largely employed on existing houses and small showrooms requiring little structural alteration, larger projects being carried out by architects who in some instances, through lack of training and the right experience, are not necessarily the best interior designers. This being the case, one would have expected to find some reference to the LCC having engaged artists to work in with their architects from the design stage on some of their buildings, so that no opportunity is lost either on internal or external decoration. This combination has produced new, simple and inexpensive techniques that can be afforded within the normal cost of the buildings.

On the other hand Mr. Wilson has compiled a mass of the most useful information which is well set out and clearly indexed. It forms a complete introduction to Colour, Paint. Wallpaper, Wall and Ceiling Materials, Glass, Floors, Furniture, Textiles and Lighting. There are 40 drawings, 29 photographs and 46 tables.

Much useful information, not always readily available elsewhere, is given, such as the section on Carpeting, which sets out the merits of all the best-known makes together with construction diagrams showing how they are made. The section on Colour is well done, giving as it does a description of the Munsell and Ostwald systems, with some simple guidance on colour discipline. The other sections are dealt with in the same detail. The illustrations are largely in the form of easily read tables, such as that for "Paint Pigments Showing Suitability for Admixture and Use" and diagrams such as one on "Planning Data for Furniture." Apart from the omissions mentioned, Mr. Wilson has produced a most useful book and has no doubt set down all that he hopes the architectural students of Sheffield University will know, after they have passed through his hands.

As such, it makes an excellent reference book for architectural students of all ages.

# There's nothing as good as Vermiculite for

# HOUSE

- \* Low cost to buy and to lay non-irritant
- \* Highest efficiency, all-enveloping, self-sealing
- \* Indestructible, fire-proof, vermin-proof
- \* Clean, odourless, rot-proof, non-conducting

specify

# VERMICULITE

FOR ROOF SCREEDS, FLOOR SCREEDS, PLASTERS AND LOOSE FILL



Send for full details:—
The Association of Vermiculite Exfoliators
Se Gresham Street, London, E.C.2 - Telephone: METropolitan 9101



technical section

A

711-58

## 6. PLANNING: SOCIAL AND RECREATIONAL

# radburn planning: a reassessment, 4—comparative costs

It is persistently stated that Radburn layouts are more expensive, particularly in terms of land, than traditional layouts. This week Paul Ritter analyses a number of comparable Radburn and non-Radburn schemes, giving the number of dwellings and habitable rooms per acre, the percentage of garages, and the square footage of road, path and green area, both per dwelling and per room. The article concludes with an estimate of the operational savings which derive from the use of the Radburn principle.

The case for Radburn planning is based not primarily on economy but on safety and on the better way of life which it gives. Nevertheless because of the widespread belief that Radburn is necessarily more costly in terms of land use, roads, services and maintenance, we have prepared an analysis of a number of comparable Radburn and non-Radburn schemes. These analyses are not presented in terms of money but in terms of the most expensive items (roads, paths and greens), including in the analyses not only the number of houses but also of habitable rooms per acre and adding that increasingly important factor, the percentage garage provision.

There are, of course, many factors other than these which contribute to cost. In order to exclude their influence when direct comparisons are made, estates (or designs) have been chosen which belong to the same period and to the same authority. Comments on the factors in the tables are as follows:

(a) Density. Greater density means greater economy (up to a point). "Dwellings per acre," often used, is not an accurate measure. Sixty one-roomed flatlets are not equivalent to 60 four-bedroomed houses. Densi-

ties, reduced to habitable rooms per acre, in each case, give a more accurate comparison.

- (b) Garage density. This is expressed as the percentage of dwellings which have a garage, attached or not. When a high percentage, or space for it, is provided, it is an important aspect of the overall density of use of a site (e.g. 300 per cent at Baldwin Hills, California!).
- (c) Area of road surface.
- (d) Area of path surface.

underpasses.

(e) Area of publicly maintained green spaces.

The above three items are reduced to square footage per dwelling and also per habitable room. There are a variety of techniques of maintaining green spaces differing in cost, and there is no standard of what is and is not included in this area. Care must be taken in using this figure in comparisons.

Also affecting the cost of layout, there are: length of runs of services, extent of path and street lighting, sweeping of roads and collecting refuse, fencing and walling, etc., imposed by the layout,

#### technical section

Table 1.—Three comparisons between traditional lay-outs and Radbarn schemes in terms of lay-out economics

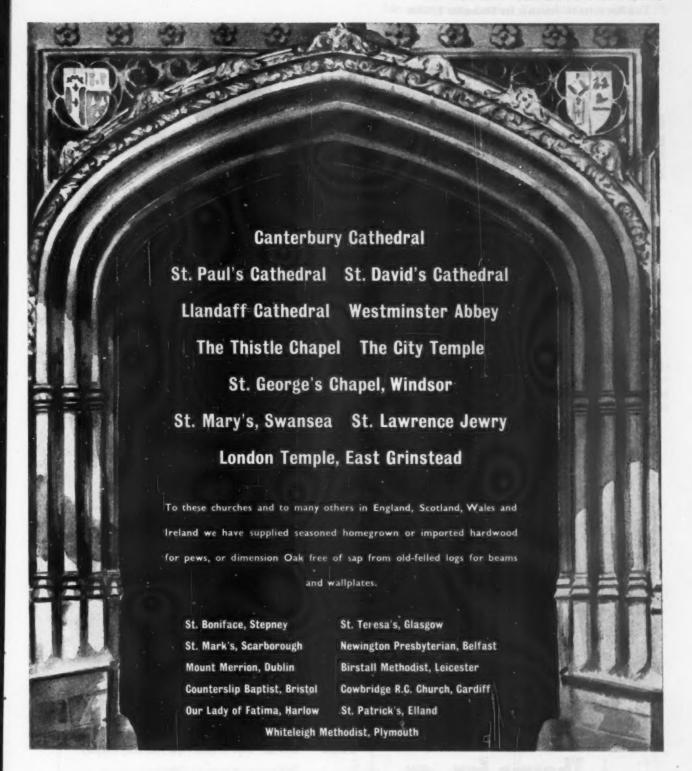
	DATA						DENSITY			AREA ANALYSIS					
NAME	Area in acres	Flats	Houses	Total dwellings	Average hab.	Other accommodation	Dwellings per acre	Hab. rooms per acre	Garage, per cent	Sq. ft. road per dwelling	Sq. ft. path per dwelling	Sq. ft. public green areas	Sq. ft. road per hab. room	Sq. ft. path per hab. room	Sq. ft. public - green areas
1. HOUSES 1953															
Average of 48 post-war schemes	24	-	-	338	3.3	Church, etc.	14-2	47	2	378	249	?	113	75	-
Scheme " B " Radburn	24	46	335	381	3.9	**	15-8	62	11	257	208	918	66	54	238
2. BEESTON												-			
Ilkaston Road	9-8	74	79	153	3-6	None	15-5	55	22	486	276	46	135	77	13
Fishpond Radburn	7-2	72	41	113	3.7	Fishpond	15-6	57	24	306	263	963	82	71	260
3. NORTHAMPTON			1												
Kings Heath		_	-	_	-	-	10-0	-	10	384		603	-	-	-
Dallington Fields	-	-	-	-	-	4 shops	9.0	-	-	304	-	702	-	-	-
Eastfield Radburn	18-1	96	232	328	3-6	None	18-1	64	10	228	-	468	63	-	132

<sup>•</sup> The author wishes to acknowledge the heip received from Derek Lyddon in providing figures for this and for the subsequent tables

Table 1 shows the savings in virtually every respect which accrue from using a Radburn layout. The great discrepancy between the open areas to be publicly maintained at Beeston is due to the area round a fish pond which was left open. If this rather special amenity were excepted, the overall density would be much greater.



Fig. 1. Service cul-de-sac layout ("Scheme B") from "Houses 1953" (MOHLG). Though not a Radburn plan in the full sense, it is the plan which most nearly approximates to Radburn principles in this particular publication.



### William Mallinson

TIMBER and VENEER MERCHANTS

130 HACKNEY ROAD, LONDON, E.2

Telephone: Shoreditch 7654

Telegrams: 'Almoner' London







for Better Business

Communications

"THERMO-FAX" is the registered trade mark of Minnesota Mining & Manufacturing Co. Ltd.

FREE	Show me	'Ways to Speed Paper Flow in my Company'
	Name	Position
Compa	лу	
Addres		

### technical section

Table 2. Four comparisons between single and/or double footpath lay-out and Rafburn schomes in terms of lay-out economics

				DATA			1	DENSI	rr		A	REA A	NALYS	IS	
NAME	Area in acres	Flats	Houses	Total	Average hab. room/dwelling	Other accommodation	Dwellings per acre	Hab. rooms per acre	Garage, per cent	Sq. ft. road per dwelling	Sq. ft. path per dwelling	Sq. ft. public green areas per dwelling	Sq. ft. road per hab, room	Sq. A. pieth per heb. room	Sq. ft. public green areas per hab. roses
1. HOUSES 1953															
Double footpath scheme " D "	24	46	337	383	4-0	Church, etc.	15-9	64	9	230	205	1,097	57	51	278
Scheme "B" Radburn	24	46	335	381	3-9		15-8	62	11	257	208	918	66	54	238
2. NOTTS, C.C.															-
Single footpath	17-3		285	285	3.9	None	16-5	65	9	223	176	122	58	45	31
Radburn Scheme	38		1	686	3-6	School, etc.	18-0	65	11	207	210	149	58	58	41
3. STEVENAGE			1												
Marymead (part)	24			552	4-6	6 shops	13-0	60	28	279	188	460	60	40	100
Elmgreen I and II, Radburn	56			707	4-8		12-7	61	73	400	262	390	83	55	80
4. COVENTRY															
Bell Green (8 or 4)	30	_	-	600	3-4	4 shops	20.0	70	12	213	200	404	62	59	119
Willenhall I, Radburn	33	360	248	644	3-4	School, 6 shops	20.0	70	50+	236	147	520	75	43	151

Table 2 shows that there is little difference in terms of first cost between double and single footpath access on the one hand and Radburn schemes on the other. It must be pointed out, however, that Radburn schemes have a consistently higher percentage of

garage provision and that, whereas single and double footpath systems do not give direct road access to each plot, Radburn schemes achieve this. Direct road access represents a saving to the local authority in dustbin collection, to the public and to the trade.

ACCOMMODATION

| Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Market | Mark

Fig. 2. Double footpath access layout ("Scheme D") from "Houses 1953" (MOHLG)

### technical section

Table 3.-Seven comparisons of Radburn schemes in terms of lay-out economics

				DATA			L	DENSIT	Y		AR	EA AN	ALYSI	S	
NAME	Area in acres	Flats	Houses	Total dwellings	Average hab, rooms per dwelling	Other accommodation	Dwellings per acre	Hab. rooms per acre	Garages, per cent	Sq. ft. road per dwelling	Sq. ft. path per dwelling	Sq. A. public green area per dwelling	Sq. ft. road per hab. rcom	Sq. ft. path per hab, room	Sq. ft. public green area per hab. room
1. SHEFFIELD Greenhill	14	136	143	279	3.7	School,	20-0	74	11	265	257	552	71	69	149
2. WREXHAM Area 6	15	144	156	300	3-9	10 shops None	21.5	84	14	203	193	473	51	49	121
3. STOURPORT Weish's Farm	16-5	162	174	336	4-2	None	20.3	85	10	347†	48	43	82	11	10
4. HARLOW Area 67	345	91	424	515	3-4	None	15.0	52	100	286	90	652	83	26	192
5. LCC Huntingdon (I)	14-8*	36	184	220	4-1	None	14-8	61	70	295	198	593	71	48	143
6. CUMBERNAULD Carbrain	28-5	149	453	602	4-3*	Shop	21-1	910	100	170	120	-	44	32	-
7. TRANENT Ormiston Road	6-5		-	115	3-2	Shops	18-0	58	87	270	125	-	84	39	-

<sup>\*</sup> Densities for Cumbernauld have been converted to the higher English equivalent

The estates represented in Table 3 are all designed on the Radburn principle. The figures show the high densities which have been achieved. Note the relatively low figures for roads and the high garage provision at Harlow, LCC, Huntingdon and Cumbernauld Carbrain. On no other layout type could so many garages have been provided near the houses.

A report for the East Lothian County Council on the Tranent Radburn Scheme says: "It also seems to have given rise to no difficulties in construction or supply of utility services, although the electricity board had to duplicate the cables for street lighting both the back roads and front footways. They had to charge for this service cable. The water board found this layout more economical than the traditional ones."

Although few figures are available the general impression seems to be that both the extra expense of double lighting and the economy in service runs occur in most schemes,

### Functional and Operational Savings

Observation of existing Radburn estates shows that they achieve substantial day-to-day savings for those who live on the estates or who visit or deliver there. It is true, of course, that most of these savings do not accrue to the housing authority, but it is only right that they should be taken into account when assessing the broad social effect of Radburn planning.



Fig. 3. Part of Elm Green Estate, Stevenage, planned on Radburn principles. Scale 1:3500

<sup>†</sup> The Stourport figure for roads includes pavements

# INDUSTRIAL ROOFING WELCOMES THE

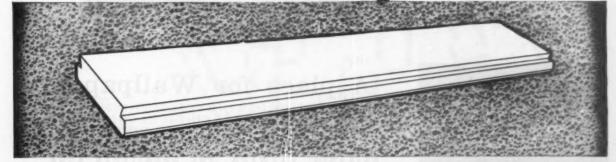
### AGE

For over 25 years in widespread use in Northern Europe and many other parts of the world, SIPOREX, the lightweight cellular structural material is now being manufactured here.

Siporex revolutionises building techniques and offers architects and structural engineers many outstanding advantages.

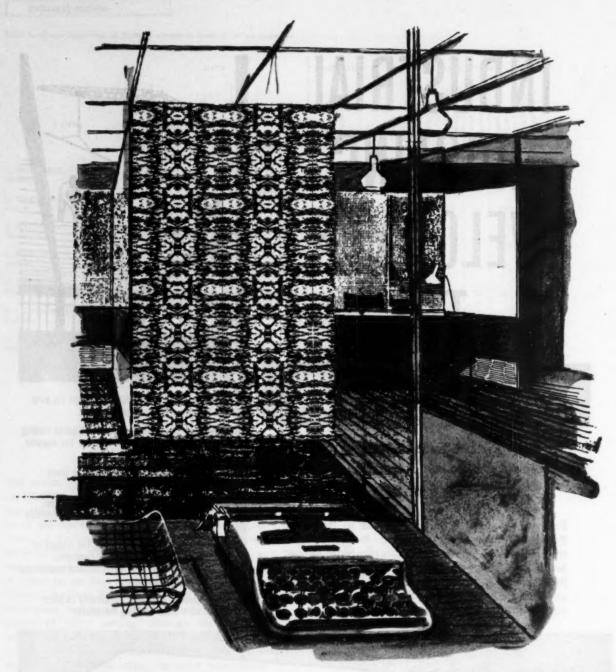


- ★ 25 years successful experience all over the world are behind Siporex.
- ★ Over 30 million sq. yds. of Siporex roofing have already been laid, from the equator to the arctic.
- ★ Siporex is simple and rapid to erect reducing site labour costs.
- ★ Siporex has a thermal insulation ten times that of concrete and is completely incombustible.
- ★ Siporex is only a quarter the weight of an equivalent volume of concrete, reducing the cost of structural framework and foundations.
- ★ Siporex compares favourably in price with other building materials.



### SIPOREX THE MODERN LIGHTWEIGHT CONSTRUCTION MATERIAL

Manufactured in Great Britain by: COSTAIN CONCRETE COMPANY LIMITED (A member of the Costain Group)
DUNCAN HOUSE, DOLPHIN SQUARE, LONDON, S.W.1. SIPOREX FACTORY, NEWARTHILL, LANARKSHIRE, SCOTLAND



Drawing by Eric Thomas



### A place for Wallpaper

THE FOLLOWING COLLECTIONS

ARE AVAILABLE FOR ARCHITECTS CONCERNED

WITH THE SPECIFICATION OR DIRECTION

OF DECORATIVE SCHEMES

PALLADIO, HAYWARD, THE ARCHITECTS BOOK

AND MAY BE SEEN AT

The Architects' Department The Wall Paper Manufacturers Limited 19/21 Mortimer Street London W I or King's House King Street West Manchester 3



Fig. 4. Harlow Area 64. Scale 1:3500



Fig. 5. Willenhall Wood II, Coventry. Scale 1:3500. The area enclosed by St. James's Lane and roads A, B and C is an orthodox Radburn superblock in that all house occupants can reach the schools, the public house and the community centre (Little Farm) by using the footpaths and for the majority this is, in fact, the shortest route

### technical section

#### Maintenance

In Coventry, Stourport and Sheffield it has been ascertained that the direct association of the public green areas with the fronts of the houses has led to greater concern and so to easier upkeep. Fewer plants and trees have to be replaced than is usual in new estates.

### Refuse Collection

At Wrexham refuse is collected on the Radburn estate in three-quarters of the time taken for other estates. This is due to the fact that the van is near to a number of back doors at each stop. Assuming a team of three men and a vehicle, this means a saving of £7 10s, per week. In ten years this would amount to some £4,000 which would pay for an underpass.

### Door-to-door Visiting

At Stourport rent collection is done in half the time on the Radburn estate. At Sheffield and at Coventry the postmen prefer the Radburn area because they finish more quickly.

#### Trade Deliveries

Trade deliveries are more efficient because a large number of houses can be contacted directly within a small distance. It is to be noticed that coal merchants charge extra in some areas where coal has to be delivered by footpath access.

### The Journey to School

It is customary to think of the Radburn contribution to this only in terms of safety; but, where the system is fully carried out, there is a considerable saving in the mother's time as she does not have to take small children to school or fetch them afterwards.

#### Conclusions

The evidence submitted shows that Radburn planning is commonly more economical in terms of land and money than traditional planning; that it is comparable in first cost with single and double footpath access, but is more economical than these in use.

### CORRECTION

In the first article of this series which appeared on November 10 it was stated (page 684): "Other Radburn Estates have been completed at Hull, Beeston, Nottingham and Letchworth." In fact these have not been completed, but are planned.

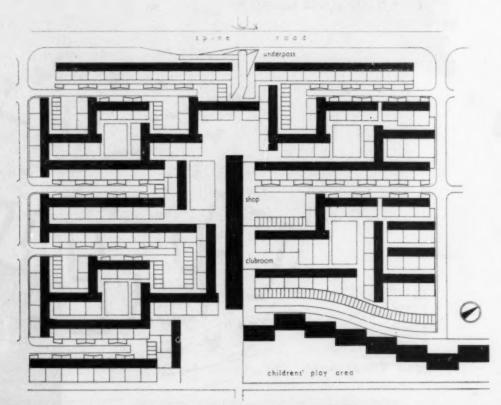


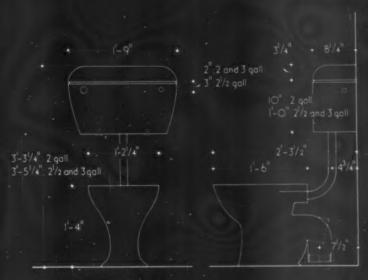
Fig. 6. Cumbernauld Carbrain I. Scale 1:2000. This is only half of the Radburn estate which figures in Table 3. Note the underpass which provides a foot path-only route to the city centre. There is a passage-way through the block which appears to bar the pedestrian route near the underpass and another through the centre block near the clubroom

### SANITATION | EQUIPMENT | MISCELLANEOUS

The Architects' Journal Library of Information Sheets 795. Editor: Cotterell Butler, A.R.I.B.A.

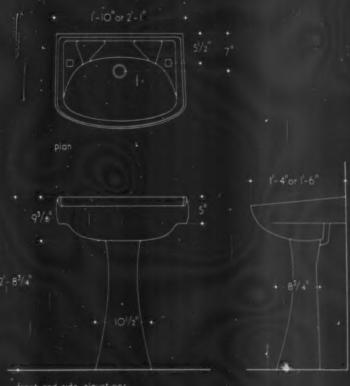


PERSPECTIVE SKETCH



front and side elevations





front and side elevations VERNON LAVATORY BASIN

### technical section

#### Maintenance

In Coventry, Stourport and Sheffield it has been ascertained that the direct association of the public green areas with the fronts of the houses has led to greater concern and so to easier upkeep. Fewer plants and trees have to be replaced than is usual in new estates.

### Refuse Collection

At Wrexham refuse is collected on the Radburn estate in three-quarters of the time taken for other estates. This is due to the fact that the van is near to a number of back doors at each stop. Assuming a team of three men and a vehicle, this means a saving of £7 10s. per week. In ten years this would amount to some £4,000 which would pay for an underpass.

### Door-to-door Visiting

At Stourport rent collection is done in half the time on the Radburn estate. At Sheffield and at Coventry the postmen prefer the Radburn area because they finish more quickly.

#### Trade Deliveries

Trade deliveries are more efficient because a large number of houses can be contacted directly within a small distance. It is to be noticed that coal merchants charge extra in some areas where coal has to be delivered by footpath access.

### The Journey to School

It is customary to think of the Radburn contribution to this only in terms of safety; but, where the system is fully carried out, there is a considerable saving in the mother's time as she does not have to take small children to school or fetch them afterwards.

### Conclusions

The evidence submitted shows that Radburn planning is commonly more economical in terms of land and money than traditional planning; that it is comparable in first cost with single and double footpath access, but is more economical than these in use.

### CORRECTION

In the first article of this series which appeared on November 10 it was stated (page 684): "Other Radburn Estates have been completed at Hull, Beeston, Nottingham and Letchworth." In fact these have not been completed, but are planned.

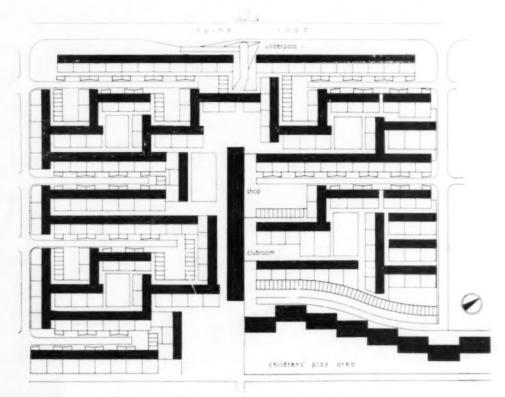


Fig. 6. Cumbernauld Carbrain I. Scale 1:2000. This is only half of the Radburn estate which figures in Table 3. Note the underpass which provides a foot path-only route to the city centre. There is a passage-way through the block which appears to bar the pedestrian route near the underpass and another through the centre block near the clubroom

### SANITATION | EQUIPMENT | MISCELLANEOUS

The Architects' Journal Library of Information Sheets 795. Editor: Cotterell Butler, A.R.I.B.A.

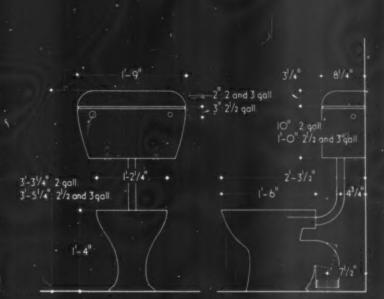
33.ZI N



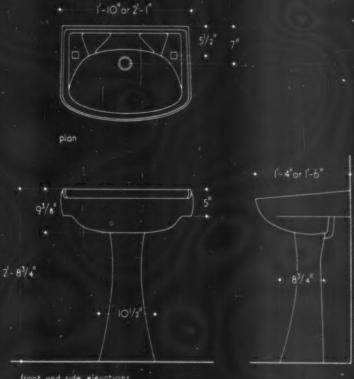
PERSPECTIVE SKETCH



PERSPECTIVE SKETCH



front and side elevations VICTOR W.C SUITE



front and side elevations VERNON LAVATORY BASIN

### 33.Z1 -ROYAL DOULTON- VITREOUS CHINA SANITARY FITTINGS

This Sheet describes vitreous china sanitary fittings: the Victor w.c. suite and the Vernon lavatory basin.

#### Material and Design

Vitreous china has the following qualities: it has a body which is quite impervious to water and does not, therefore, rely upon the glaze for its sanitary properties, the glaze being necessary only to provide a smooth surface which is easy to clean. It has great strength and durability and is, therefore, recommended where the hardest use and treatment are expected, as in industrial buildings, while its clean appearance renders it suitable for normal domestic use or where a superior installation is required. Both initial and maintenance costs are low.

#### Victor W.C. Pan

The dimensions of the w.c. pan conform to B.S. 1213: 1945. It is available with an S or P trap which may in each case be either central or turned 90° to the right or left. All are obtainable with a vent if required. In addition, an S trap can be supplied (turned 90° to the right only) with full bore inspection chamber and brass cap. The pan has a plate inlet connection which is one of the two types of con-nection most commonly used. When secured the plate compresses a rubber ring providing a clean watertight joint; it gives the pan an unbroken line at the back, reducing dirt traps.

Where the pan is required for industrial or similar use, plain or cellulose-painted wooden seat pads can be supplied if required: these are screwed to the rim by the manufacturer.

### Victor Low Level Cistern

The dimensions of the cistern conform to B.S. 1125: 1959. It is available in capacities of 2, 2½ and 3 gallons. It may be obtained with side inlet and overflow, bottom inlet and overflow or with bottom inlet only, to take float valve fittings (3 gallon size only). The operating lever may be right- or lefthanded, the hole not required for the lever being sealed with a vitreous china stopper which may be supplied loose or fitted as required. The cistern is supported by concealed cast-iron brackets, which are supplied unless the cistern is specifically ordered unfitted."

A vitreous china syphon can be supplied if required and a \frac{1}{2}-in. ball valve and \frac{3}{4}-in. overflow can also be supplied. A high-level cistern of similar design, the Hyvic, is obtainable. It has a side inlet and overflow and provision for a chain pull on the opposite side to the inlet. White vitreous-enamelled cast-iron brackets can be supplied if required.

#### Vernon Lavatory Basin

The fixing dimensions of the basin conform to B.S. 1188: 1944. 1-in. pillar taps and 11-in. plug waste are required. All fittings can be supplied by the manufacturer. The basin may be of the pedestal type or supported on wall brackets: for the latter the manufacturer can supply cast-iron brackets for fixing only or combining a towel rail.

The vitreous china can be supplied in white, turquoise, primrose, light coral, opal green, sky blue, mist grey, old ivory. Metal fittings are supplied in polished brass or chromium-plated finish.

Compiled from information supplied by:

**Doulton Sanitary Potteries Limited** 

Sales Office: Doulton Sanitary Potteries, Whieldon Pottery, Stoke-on-Trent, Staffordshire. Telephone: Stoke-on-Trent 47001.

Works (Vitreous China and Earthenware): Stoke-on-Trent, Staffordshire. Telephone: Stoke-on-Trent 47001. rare): Whieldon Pottery,

Works (Fireclay Ware): Springfield Works, Dudley, Worcestershire. Telephone: Dudley 54481.

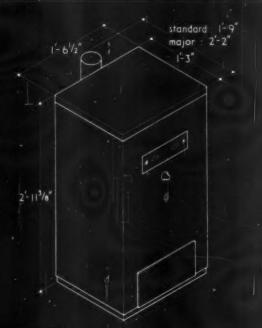
Head Office: Doulton House, Albert Embankment, Lambeth, London, S.E.1. Telephone: Reliance 1241.

> Copyright Reserved. The Architects' Journal Library of Information Sheets. Editor: Cotterell Butler, A.R.I.B.A.

### SPACE HEATING UNITS GAS

The Architects' Journal Library of Information Sheets 796. Editor: Cotterell Butler, A.R.I.B.A.





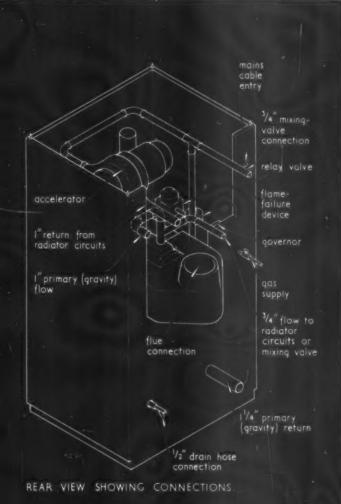
ISOMETRIC VIEW OF BOILER

	area of radiator surface (sq.ft) for capacity of indirect cylinder (gal.)								
model	60	40	30	no indirect cylinder					
standard	100	120	140	175					
major	17,5.	195	215	250					

TYPICAL INSTALLATION INCORPORATING INDIRECT CYLINDER

ECONOMATIC GASTERED BOILERS.

TABLE OF AREAS OF RADIATOR SURFACE



cold water storage tank

hot water supply to taps indirect cylinder primary (gravity) circuit

gate valve

gate valve

expansion tank

circuit no 1

circuit no 2

International Boilers and Radiators

### 29.C5 · ECONOMATIC· GAS-FIRED BOILERS

This Sheet describes Economatic gas-fired boilers for small bore central heating and indirect domestic hot water supply. These boilers are thermostatically controlled so that they cease operating automatically when the temperature of the water rises to a predetermined level and are re-ignited when the temperature drops. They are also fitted with a time switch which can be set to switch off the installation and re-ignite the boiler at given times, e.g. overnight.

### **Design and Construction**

Outer casing: The outer casing is of plastic-covered steel which is heat- and scratch-proof.

Boiler: The boiler is a cast-iron sectional type.

Burner unit: Both models have four tubular burners, each burner in the standard model having 20 jets and in the major model, 32.

Controls: The operation of the boilers is fully automatic. The controls consist of boiler thermostat, gas governor, relay valve, flame-failure device, time switch and accelerator, all of which are incorporated within the boiler casing and supplied ready assembled and wired.

Insulation: The insulation is prefabricated glass fibre slabs strapped to the boiler.

Flue connection: A vertical flue connection is provided, with a draught diverter incorporated. The standard model has a  $3\frac{1}{2}$ -in. and the major a 4-in. diameter outlet.

Water connections: The water connections are as shown in the drawing on the upper right of the face of the Sheet.

Gas connection: The gas connection is \(\frac{1}{2}\)-in. B.S.P. for the standard model and \(\frac{3}{4}\)-in. B.S.P. for the major model.

### Sizes

The overall sizes of the two models are as given on the face of the Sheet.

### Operation

An indirect-acting rod-type thermostat works in conjunction with a relay valve to give "on-off" control. A time switch is also fitted which can be set to switch off and re-ignite the boiler at given times and this can be over-ridden by another control to give continuous burning in severe weather.

### Rating

The standard model has an output of 33,000 B.t.u./hr. (gas consumption 42,500 B.t.u./hr.) and the major model, an output of 50,000 B.t.u./hr. (gas consumption 63,000 B.t.u./hr.).

### Installation

The boiler should be mounted on a level fireproof base with a minimum clearance at the front of 1 ft. 6 in.

for the standard model and 1 ft. 8 in. for the major model. The room where the boiler is sited must be adequately ventilated and the flue to the outside air should be as short as possible and so placed as to avoid down-draughts.

Flue connection: Reference should be made to British Standard Code of Practice 331.104 and, if necessary, the local gas authority should be consulted. The effective height of the flue pipe should be 3 ft. 0 in. minimum and square bends should be avoided. Where a length of horizontal run is unavoidable, this should be counteracted by at least the same length of vertical run. Joints should be firmly caulked with asbestos rope and finished with asbestos-fibre, or similar, cement.

Water circuit: An indirect cylinder must be incorporated where the system is to supply domestic hot water. Where there is an existing direct cylinder it should be replaced by an indirect one unless a Sigmund Thermochange external calorifier is used to convert the system to indirect working. With the latter, no feed pipe or vent pipe is required as these are incorporated in the Thermochange unit. As the pump does not operate on the primary (gravity) circuit, this must be installed with the normal rise and fall in 1-in. or 1 ½-in. copper piping. The maximum head of water is 60 ft. A draincock should be fitted at the lowest point in the system and air release cocks for all radiators should be fitted at the highest points in each circuit.

Gas connection: No isolating cock need be fitted unless specifically required by the local gas authority. Before finally making the gas connection, the supply should be turned on for a few seconds to blow out any dirt or water from the supply pipe (taking the normal precautions against naked flames).

### Finish

The Stelvetite plastic-coated steel casing is available in white or ivory.

### Further Information

The manufacturer maintains a technical advisory department available to answer questions dealing with the installation of these boilers.

Compiled from information supplied by:

International Boilers and Radiators

Address: Earlsway, Team Valley, Gateshead, 11, Co. Durham, Telephone: Low Fell 7855!.

Copyright Reserved.

The Architects' Journal Library of Information Sheets.

Editor: Cotterell Butler, A.R.I.B.A.

### working detail

BALCONY: HOSTEL AT LOUGHBOROUGH

T. A. Collins, Architect to the Leicestershire County Council



This is a straightforward balcony detail in traditional construction in which the floor joists are projected across a lintel. The floor boards on the balcony are laid with gaps between them. The handrail is of p.v.c.

### 29.C5 · ECONOMATIC· GAS-FIRED BOILERS

This Sheet describes Economatic gas-fired boilers for small bore central heating and indirect domestic hot water supply. These boilers are thermostatically controlled so that they cease operating automatically when the temperature of the water rises to a predetermined level and are re-ignited when the temperature drops. They are also fitted with a time switch which can be set to switch off the installation and re-ignite the boiler at given times, e.g. overnight.

### Design and Construction

Outer casing: The outer casing is of plastic-covered steel which is heat- and scratch-proof.

Boiler: The boiler is a cast-iron sectional type.

Burner unit: Both models have four tubular burners, each burner in the standard model having 20 jets and in the major model, 32.

Controls: The operation of the boilers is fully automatic. The controls consist of boiler thermostat, gas governor, relay valve, flame-failure device, time switch and accelerator, all of which are incorporated within the boiler casing and supplied ready assembled and wired.

Insulation: The insulation is prefabricated glass fibre slabs strapped to the boiler.

Flue connection: A vertical flue connection is provided, with a draught diverter incorporated. The standard model has a 3\frac{1}{2}-in. and the major a 4-in. diameter outlet.

Water connections: The water connections are as shown in the drawing on the upper right of the face of the Sheet.

Gas connection: The gas connection is \(\frac{1}{2}\)-in. B.S.P. for the standard model and \(\frac{3}{2}\)-in. B.S.P. for the major model.

### Size

The overall sizes of the two models are as given on the face of the Sheet.

### Operation

An indirect-acting rod-type thermostat works in conjunction with a relay valve to give "on-off" control. A time switch is also fitted which can be set to switch off and re-ignite the boiler at given times and this can be over-ridden by another control to give continuous burning in severe weather.

### Rating

The standard model has an output of 33,000 B.t.u./hr. (gas consumption 42,500 B.t.u./hr.) and the major model, an output of 50,000 B.t.u./hr. (gas consumption 63,000 B.t.u./hr.).

### Installation

The boiler should be mounted on a level fireproof base with a minimum clearance at the front of 1 ft. 6 in.

for the standard model and 1 ft. 8 in. for the major model. The room where the boiler is sited must be adequately ventilated and the flue to the outside air should be as short as possible and so placed as to avoid down-draughts.

Flue connection: Reference should be made to British Standard Code of Practice 331.104 and, if necessary, the local gas authority should be consulted. The effective height of the flue pipe should be 3 ft. 0 in. minimum and square bends should be avoided. Where a length of horizontal run is unavoidable, this should be counteracted by at least the same length of vertical run. Joints should be firmly caulked with asbestos rope and finished with asbestos-fibre, or similar, cement.

Water circuit: An indirect cylinder must be incorporated where the system is to supply domestic hot water. Where there is an existing direct cylinder it should be replaced by an indirect one unless a Sigmund Thermochange external calorifier is used to convert the system to indirect working. With the latter, no feed pipe or vent pipe is required as these are incorporated in the Thermochange unit. As the pump does not operate on the primary (gravity) circuit, this must be installed with the normal rise and fall in 1-in. or 1 1-in. copper piping. The maximum head of water is 60 ft. A draincock should be fitted at the lowest point in the system and air release cocks for all radiators should be fitted at the highest points in each circuit.

Gas connection: No isolating cock need be fitted unless specifically required by the local gas authority. Before finally making the gas connection, the supply should be turned on for a few seconds to blow out any dirt or water from the supply pipe (taking the normal precautions against naked flames).

### Finish

The Stelvetite plastic-coated steel casing is available in white or ivory.

### **Further Information**

The manufacturer maintains a technical advisory department available to answer questions dealing with the installation of these boilers.

Compiled from information supplied by: International Boilers and Radiators

Address: Earlsway, Team Valley, Gateshead, 11,
Co. Durham.
Telephone: Low Fell 78551.

Copyright Reserved.
The Architects' Journal Library of Information Sheets.
Editor: Cotterell Butler, A.R.J.B.A.

### working detail

BALCONY: HOSTEL AT LOUGHBOROUGH

T. A. Collins, Architect to the Leicestershire County Council

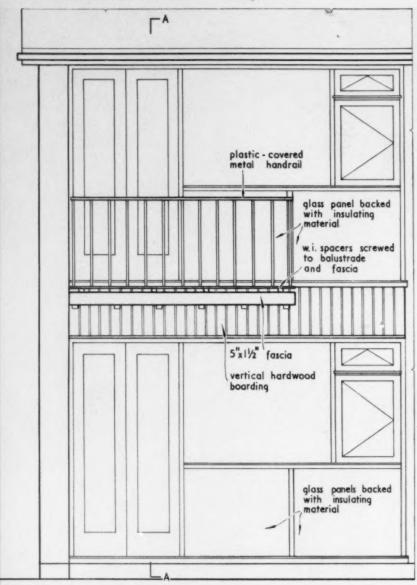


This is a straightforward balcony detail in traditional construction in which the floor joists are projected across a lintel. The floor boards on the balcony are laid with gaps between them. The handrail is of p.v.c.

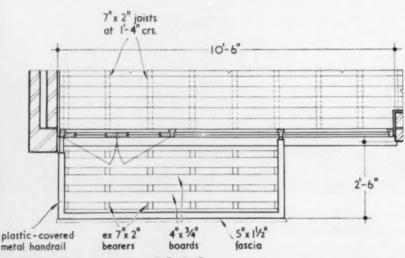
### working detail

BALCONY: HOSTEL AT LOUGHBOROUGH

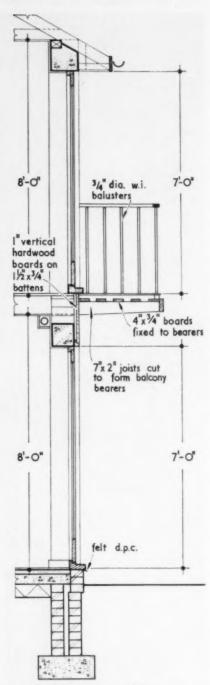
T. A. Collins, Architect to the Leicestershire County Council



ELEVATION . scale 3/8" = 1-0"



PLAN OF BALCONY. scale 3/8" = 1-0"



SECTION A-A. scale 3/8 = 1-0"

### BROUGHTON MOOR OLIVE GREEN SLATE RIVEN FINISH



Ideally suited for internal and external facings,
Broughton Moor Green Slate can be supplied in a variety
of finishes— and remains sound for centuries.
These characteristics made it an ideal choice for the
Rutherford College of Technology, Newcastle-upon-Tyne,
architect: George Kenyon, A.R.I.B.A., City Architect.
For this contract, Broughton Moor Olive Green naturally riven
slate was used, approximately 16,000 square feet
being supplied in the form of Ormecraft panels,
to which the Broughton Moor Olive Green Slate
was cramped and bonded. About 5,000 square feet
of the same slate was fixed traditionally.

An example of Broughton Moor Green Slate showing the naturally riven finish. Finely rubbed, sanded and frame sawn finishes are also supplied and all available in three distinct colours:

Light Sea Green, Olive Green and Pale Green Barred. Technical pamphlets showing typical methods of fixing are available as follows:

- 1. Flooring. 2. Facing. 3. Coping.
- 4. Cills. 5. Riven Face Slabs.

### **Broughton Moor**

GREEN SLATE QUARRIES LTD

CONISTON

THE LAKE DISTRICT . LANCASHIRE

LANCASHIRE TELEPHONE: CONISTON 225/6

### **LEAD ASBEX'**

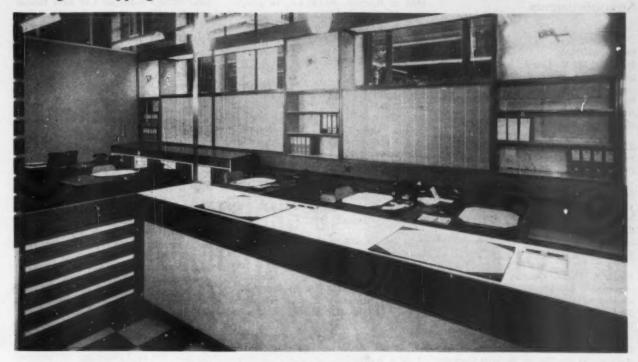
highest grade flexible Bitumen Dampcourse -Asbestos based with a lead core.

Also available without lead core-'Asbex' \*

### dampcourses by PERMANITES

designed and made with your reputation in mind, as well as our own.

### Redesigned Shipping Office



In the passenger department for Furness Withy & Co. Ltd., Brian Drury has gone a long way toward making pleasant what must have been a fairly dreary space. Most successful is the window wall. On existing marble piers alternating with tall windows he has built up a well proportioned, beautifully detailed and executed storage-display wall of mahogany,

bamboo and glass. Opposite is the waiting area with a handsome hung ceiling, drop lights and map wall; but there are also a few too many textures as well as a too clear view of the original ceiling, which has been left untreated over the office section and recalls the old dreariness.

### CHURCH COWLEY PRIMARY SCHOOL

## -recently completed for Oxford City Council

Architect: E. G. Chandler, F.R.I.B.A., M.T.P.I., Oxford City Architect.

Bricks: 2% Red Multi Rustics supplied through Prat (Watford) Ltd

Builders: A. C. Carter (Oxford) Ltd.

Ibstock Facing Bricks were chosen for this new School for their durability and attractive appearance. Suitable for every type of building—Ibstock machine and hand-made facing bricks are the natural choice of Architects and Builders alike.

Send for sample and full details



Most facing bricks are in short supply and all orders should be placed as far ahead as ever possible. We are, of course, anxious to receive enquiries for future deliveries and shall be happy to make reservations against architects' specifications.

### FAGING BRIG

THE IBSTOCK BRICK & TILE COMPANY LTD., Ibstock, near Leicester. London: B.R. Goods Depot, Wright's Lane, Kensington, W. 8.

Phone: Ibstock 591 (3 lines). Phone: Western 1281 (2 lines).

### Announcements

#### PROFESSIONAL

Professor M. V. Laurie, O.B.E., has been appointed a member of the Steering Committee of the D.S.I.R.'s Forest Products Research Laboratory at Princes Risborough. He succeeds H. Douglass, General Secretary of the Iron and Steel Confederation.

R. J. Hollins, A.I.O.B., has been appointed Principal Examiner in Management for 1961 by the Institute of Builders.

D. J. Shepherd, A.R.I.C.S. and V. J. Crocker, A.R.I.C.S., Chartered Quantity Surveyors, have entered into partnership and are practising under the title of Crocker and Shepherd at 8 Brunswick Place. Leeds, 2 (telephone Leeds 24555).

Ernest S. Dwiar, Quantity Surveyor, has commenced practice at "Oaklands," Savill Road, Lindfield, Sussex (telephone Lindfield 2094), and will be pleased to receive trade catalogues.

C. Heathcote, A.R.I.B.A., Assistant City Architect to the City of Norwich Corporation has been appointed Deputy City Architect. He succeeds C. J. Tomkins, F.R.I.B.A., who is retiring. Moir & Bateman, F./A.R.I.B.A., in association with K. McCann, A.R.I.B.A., have moved their head office to new offices at the Trustee Savings Bank Chambers, Town Hall Square, Rochdale. Their Manchester office remains at 180, Oxford Road, Manchester.

Cynthia Wood, A.R.I.B.A., has relinquished her appointment as Senior Architect with the Stevenage Development Corporation, and has started in practice on her own account. Until suitable office accommodation is available in the locality, she is carrying on her practice from her home, 15, Aston Park, Stevenage, Herts, where she will be pleased to receive trade literature.

Gordon Redfern, A.R.I.B.A., has moved to 66, Wavendon Avenue, Chiswick, W.4 (telephone Chiswick 2911).

128 films, chosen by a panel of experts as being the most up-to-date on all aspects of building, are available, free, on 16 mm., from Regional Technical Information Officers at the M.O.W.'s headquarters or from its Regional Offices, at Edinburgh, Cardiff, Leeds, Manchester, Reading and Bristol.

#### TRADE

Ford & Walton Ltd., one of the Chamberlin Group of Companies, have appointed M. H. Briggs, D.B.E., and K. R. Joiner, A.M.LH.V.E., directors of the firm.

Jablo Plastics Industries Ltd. have formed with the Maltese section of C. H. Bailey, a company in Malta under the name of Jablo Plastics Industries (Malta) Ltd.

W. B. Haughan and G. W. Greenhow are now on the board of John Laing & Son (Holdings) Ltd.

George Newark & Son Ltd. have moved into new premises at Curriers Close, Charter Avenue, Coventry.

Allen Fairhead & Sons Ltd. announce that B. Collier is now Chief Surveyor to the Board of Directors, and J. Coals—Contracts Manager.

R. E. Stenning M.A., F.I.Arb., Secretary of the London Master Builders' Association will be leaving on March 1, 1961, to take up an appointment with Falkus Bros. Ltd.

Mono Curtain Rail Co. Ltd. have moved to new premises at Cherry Orchard, Lichfield.

The U.A.M. Group have appointed W. Sylvester to their Birmingham sales area.

### Correction

On page 591 of AJ, October 20, 1960, we illustrated two houses designed by Favell, Bellis and Associates. We apologise for having given this firm's name incorrectly.

### ANNOUNCING ...



### SPECIFY Leca NOW!

IN PRODUCTION AGAIN EARLY 1961

Leca (Great Britain) Ltd., Mill Lane, High Ongar, Essex. Tel: Ongar 2048



Model ECS/W2

# DESIGNS OF DISTINCTION IN WOOD



Calendar Clock



Model ECS/W4



Model ECS/W3

E.C.S. manufacture
a wide range of Wooden Clocks in
distinctive and elegant styles.
In addition to standard
models, and the calendar clock,
there are "specials"—clocks
manufactured to your own
individual requirements. With
E.C.S. you can be sure of
the highest standards of
dependability and workmanship.



Model ECS/W1





### ENGLISH CLOCK SYSTEMS

179-185 GREAT PORTLAND STREET, LONDON W1. LAN 7226 Branches in:

BIRMINGHAM, GLASGOW, MANCHESTER, LEEDS AND BELFAST

A Branch of the Clock and Watch Division of SMITHS THE ARCHITECTS' JOURNAL (Supplement) December 8, 1960

# now!

a plastic trap joins the range of well-known

### GREVAK

ANTI-SIPHON TRAPS

"GREVAK MONITOR"

(Patent)

anti-SIPHON TRAP IN 'HOSTALEN'

- HIGH QUALITY PLASTIC.
- COMPLETELY UNSIPHONABLE.
- NO ANTI-SIPHON PIPEWORK.
- UNAFFECTED BY BOILING WATER.
- RESISTANT TO ACIDS.
- RESISTANT TO DETERGENTS.
- WEIGHS ONLY 73 ozs.
- INEXPENSIVE



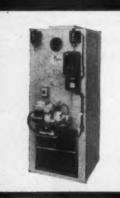
Fully descriptive literature obtainable from :-

GREENWOOD and HUGHES LIMITED · CARLISLE HOUSE, 8 SOUTHAMPTON ROW, LONDON, W.C.1. Telephone CHAncery 9377 (3 lines)
Telegrams: Antivacu, Westcent, London

# Air Heating-

FOR ECONOMICAL
CLEAN SPACE HEATING

### Air Heat



### HIGH THERMAL EFFICIENCY-80-85%

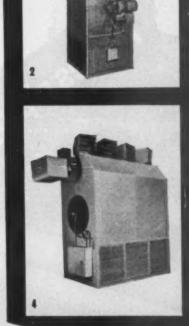
LOW RUNNING COSTS—up to 50% cheaper than alternative methods. Even greater economy with recirculation of warm air.

FULLY AUTOMATIC — thermostatic controls keep room temperature at an even level, ensure most economical use of fuel. Electric ignition. Fully protected by automatic safety devices against flame failure, etc.

Airheating units keep warm air gently circulating throughout the entire building. There is a model suitable for all sizes and types of home, office and factory. The units can be used to circulate cool air in

- 1 AIRHEAT 'MIDGET' MK II: Output 40,000/100,000 B.T.U./hr.; fuel consumption 0.285 to 0.71 gals/hr., 35 secs. diesel or gas oil; capacity approx. 30,000 cu. ft.
- 2 AIRHEAT 'MINOR': Output 100,000| 250,000 B.T.U.|hr.; fuel consumption 0.71 to 1.78 gals|hr., 35 secs. gas oil; capacity approx. 60,000 cu. ft.
- 3 AIRHEAT 'SENIOR'; Output 350,000| 600,000 B.T.U.|hr., fuel consumption 2.49 to 4.27 gals|hr.; 35 secs. or 200 secs. oil; capacity approx. 180,000 cu. ft.
- 4 AIRHEAT 'MAJOR': Output up to 1,500,000 B.T.U.|hr.; max. fuel consumption 11 gals/hr. oil; 35 secs. gas oil; capacity approx. 450,000 cu. ft.

Write for technical literature containing full specifications



Have your 'AIRHEAT' system designed and installed by

AIR HEATING LTD

Telephone: Paisley 3244/5

MURRAY ST PAISLEY SCOTLAND

Telegrams: Airheat Paisley

London Office:

28 Victoria Street London SW1 Telephone: Abbey 6451



Piping made by Extrudex Limited using Geon RA.170 High Impact PVC Geon is a reg'd trade mark

**British Geon Ltd** 

A COMPANY IN THE DISTILLERS PLASTICS GROUP



SALES AND TECHNICAL SERVICE DEVONSHIRE HOUSE PICCADILLY LONDON WI HYDE PARK 7321

Distillers Plastics Lewe Everyman

# ELECTRIC FLOOR WARMING



# How electric floor warming simplified planning and reduced installation costs in new Sheffield Corporation flats

Efficiency and comfort Electric floor warming was selected for this modern block of Corporation flats, because it was the simplest and most efficient method of providing constant, even, all-round warmth.

The system is installed in the living rooms and halls. Average loading per flat is 2.4 kW and each living room also has an electric fire for supplementary heat. The estimated average electricity cost is 15/- per week for all purposes including the floor warming, cooking, water heating, lighting, supplementary space heating, etc.

Why was planning greatly simplified? Electric floor warming freed the architects from the task of planning for fireplaces, flues and chimney breasts; avoided, too, the need for outside boilerhouses, chimneys and fuel stores.

Why are costs so low? Electric floor warming works on the economical principle of storing up heat for the day

by using cheap 'off-peak' electricity. It provides constant background heat which can be topped up by electric fires when required; a high proportion of radiant heat gives 'warmth without stuffiness'; and no heat is wasted by using an unnecessarily high temperature.

Labour saving and clean Electric floor warming is completely automatic. This means there is much less work for the housewife, and no need to employ boiler-room staff.

Another great advantage is its cleanliness—electric floor warming is undoubtedly the complete and most practicable answer to the far-reaching Clean Air Act.

If you are thinking of installing electric floor warming ask your Electricity Board for details.

Issued by the Electrical Development Association, 2 Savoy Hill, London, W.C.2



DRAWBRIDGES

... but every Englishman's home can be his castle — thanks to the Sterdy Porter. Moats and drawbridges served our ancestors well, but they were crude and expensive, requiring an enormous force of villeins, serfs, varlets etc. to ensure that they remained an efficient means of keeping unwanted callers out. The Sterdy Porter is much more subtle in its approach — it is in fact the perfect autoproach — it is in fact the perfect auto-matic hall porter. It provides communi-cation between front door and flat and enables tenants to speak to callers and release the electric front door lock without leaving their living room, the Sterdy Porter will give trouble free 24 hour service with the minimum maintenance. Sterdy Porter systems are available for hire or for outright purchase, write for full details to:



### STERDY

### TELEPHONES LTD

(Incorporating W. C. Davey & Co.)
PIONEERS IN SPECIALISED COMMUNICATIONS

Queen's House, 180-182 Tottenham Court Road, London, W.1 Telephone: MUSeum 4414, 4415 and 6388



### X-RAY PROTECTION FOR HOSPITALS ...

### PREMISE ENGINEERING CO.

Specialists in Lead Protection for X-Ray Departments, invite opportunities to tender for the construction and lead protection of new Hospital projects, or the alteration and protection of existing departments.

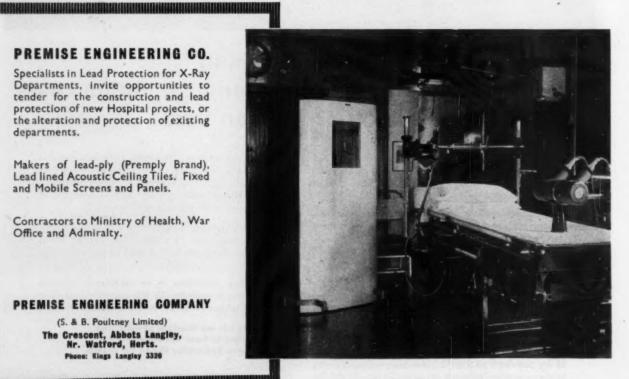
Makers of lead-ply (Premply Brand), Lead lined Acoustic Ceiling Tiles. Fixed and Mobile Screens and Panels.

Contractors to Ministry of Health, War Office and Admiralty.

### PREMISE ENGINEERING COMPANY

(S. & B. Poultney Limited)

The Grescent, Abbets Langley, Nr. Watford, Herts. Phone: Kings Langley 3320



### NOW

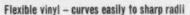
### **EVERGLEAM**

COUNTER TOPPING by

GOOD YEAR

starts a counter revolution





### BASY TO LAY

Evergleam cuts with ordinary scissors . . . rolls in one piece over splash back, counter top and edge . . . gives seamless square-edge facings . . . fixes permanently with contact or impact adhesive.

### EASY TO MAINTAIN

No waxing. No scrubbing. A damp cloth keeps Evergleam sparkling clean. It resists dirt, scuffing, all normal hazards — stands the 'hot pan' test. And it won't chip or crack.

### EASY ON EYE AND EAR

Evergleam is decorative . . . comes in an array of 23 sealed-in colours, patterns and textures. Evergleam is resilient . . . absorbs blows, turns strident clatter to soft murmur in restaurant, canteen, coffee-bar or store.

### EASY ON THE POCKET

With all its good looks, Evergleam is cheaper to buy, cheaper to instal, cheaper to maintain . . . gives lasting wear at lowest cost. It's the topping for your next contract.



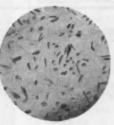








EVERGLEAM IS AVAILABLE IN A WIDE RANGE OF COLOURS PATTERNS AND TEXTURES.









HAVE	YOUR	SECRETA	RY PO	ST THIS	COUPON
To: Qe	odyear T	yre & Rubbe	r Co. (GB	Ltd., Wol	verhampton.

Please send booklet #1.6 describing Evergleam Vinyl Counter Topping

Name

Company

Address

### Curtain Walling

All framing is of aluminium. The specially constructed mullions incorporate internal channel uprights to receive partitions. Vents are T.H., H.P.H. and S.H. (double windows). In-fill at spandril and below head is pale blue Muroglass.

New Offices: Smiths Stamping Works (Coventry)Ltd., Ribble Road, Coventry. Architects: Redgrave & Clarke, A./F.R.I.B.A.



#### STANDARD PATENT GLAZING CO.

WORKS: DEWSBURY

Phone 1213-4

LONDON OFFICE HOUnslow 3079

Branches at BIRMINGHAM and BRISTOL





### for clean cheap heat



Gas coke is the cheapest of the smokeless

Gas coke is high in useful efficiency-more heat for your money.

Gas coke can be used on existing solid fuel boilers.

Units fired by other fuels may be easily converted.

There is a Coke Service Department at each Area Gas Board where expert advice on smokeless heat problems is readily available. In addition there are a number of technical booklets available showing how you can modernise your heating methods and save money.

No. 1 - Coke-fired domestic appliances and their application

No. 2 - Coke-fired central heating plant

No. 3 — Coke-fired small steam-raising plant

No. 4 — Coke-fired semi-producer furnace for drying and process heating plant

No. 5 - Coke-fired crop drying plant

No. 6 - Coke-fired glass house heating and soil warming equipment

Obtain copies of these books from your Area Gas Board or from

THE GAS COUNCIL, COKE DEPARTMENT, 1 Grosvenor Place, London, S.W.1.

# SURFIEX FLOORINGS VINYL SURODUR PERMAGILE

-can be laid without stopping production by your own staff or builder. One application on any base-wood, concrete, etc.-sets overnight, providing a glass-smooth surface which will take a high polish. Easy to clean and requiring no maintenance, fireproof, insulated throughout and impervious to oil and grease. Hard wearing, yet very attractive, INDUSTRIAL VINYL is perfect for Stores, Schools, Banks, Hospitals, Canteens, Machine Shops and similar purposes.

### SURFEX-SURODUR

-a heavy industrial flooring, dust-free and nonslip with a pure quartz surface as hard as titanium! Impervious to wet and dry abrasion and impact of the heaviest loads. Maintenance costs are negligible. A heavy-duty flooring, used even for tank-testing grounds. Recommended for aeroplane hangars, locomotive sheds, dockyards, quays, breweries, etc.

### PERMAGILE

-for the preservation and repair of concrete, brickwork, masonry and other structural and decorative surfaces. Impervious to chemical and atmospheric corrosion, ideal for the restoration of cracked and spalled buildings such as grain elevators, silos, tanks, swimming pools and dams. Effective on interior or exterior brick or concrete walls, ceilings and floors, and particularly for the skid-proofing of concrete floors, stairs and roadways.

ALL SURFEX FLOORINGS CAN BE LAID EASILY BY YOUR OWN STAFF OR BUILDER

We are specialists in flooring products and our technical experts are freely available to advise on all flooring problems.

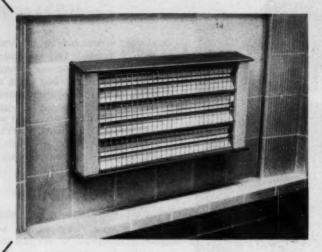
For full descriptive literature, complete and return this coupon today.

					your brochures
				PERMA	
Your F	Representa	ative may	call _	(tick where	applicable).

(BLOCK CAPITALS, PLEASE)

### New from FALKS

"Supersil" infra-red panel heater



Loading: 24kW. Voltages: 200/220. 230/250 Dimensions: 24%" W. 134" H. 3%" return to Price: £11. 16. 8. plus P. Tax. £2. 3. 3.

Designed by J. M. Barnicot, F.R.S.A., M.S.I.A.

This elegant newcomer to Falks range of infra-red heaters provides safe, clean and economical heat through silica encased spiral elements, each contained in its own parabolic reflector, giving maximum heat radiation over a wide area.

Elements: 750W each, individually controlled by FALKS SNAPFAST double pole switches.

Finish: Chromium plated brass reflectors, body stove enamelled in dual colours-Red/ Ivory, Grey/Ivory.

### **FALKS**

91 FARRINGDON ROAD, LONDON, E.C.1. West End Showrooms: 20/22 Mount Street, W.I. Branches in principal cities of Gt. Britain.



Luxury

specified

again and

again

modernfold

### expanding walls and doors

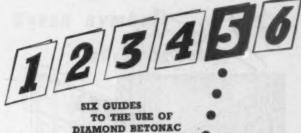
lead in solving today's space and room division problem. Precision engineered, the patented metal framework is covered in luxury P.V.C. Leathercloth. There is a wide choice of colours from which to choose. Tailor-made to specific measurements, Modernfold require no floor track, are light to handle and draughtproof. Our illustration shows COLESHILL GRAMMAR SCHOOL. Architect: Eric Davis, F.R.I.B.A., A.M.T.P.I., County Architect, Warwickshire County Council. If noise is a problem, the new SOUNDMASTER will provide the answer - specially designed for u where quiet working conditions are required. Details of official test available.

WALLFOLD by Modernfold-covered in paintable P.V.A. Leathercloth-the door in the lower price range, available particularly for estate developers.

Write today for full details of complete range HOME FITTINGS (GREAT) LTD. Dept. VICTORIA WORKS, HILL TOP, WEST BROMWICH, STAFFS
AJ.12 Telephone: WEDNESBURY 0761

REMEMBER - MODERNFOLD ALWAYS FILL THE GAP-COMPLETELY







### Waterproof Diamond Betonac Floor

Where floors in industrial structures have to be capable of resisting water, as well as rigorous wear and tear, Diamond Betonac aggregate specifications can be modified to incorporate a suitable waterproofer from the Q.W.S. range of Setcrete products.

A Diamond Betonac waterproof floor is admirably suited to conditions under which a complete waterproof floor covering is essential.

Diamond Betonac does not oxidise and, therefore, there is no risk of unsightly surface stains.

Diamond Betonac is one of the most widely applicable floor surfacing materials used in the building and structural engineering fields today.

DIAMOND BETONAC DEFIES ABRASION

### Q W S

Full particulars obtainable from

### QUICKSET WATER SEALERS LTD.

MANUFACTURING AND SALES DIVISION 20 Albert Embankment, London, S.E.11 Telephone: Reliance 6731-2-3

A MEMBER OF THE CEMENTATION GROUP OF COMPANIES



The new head office building of

FIRE BRICADE FORM INLET TO OIL STORE

Midland Assurance Ltd is protected with

... CHARLES WINN FIRE FIGHTING EQUIPMENT



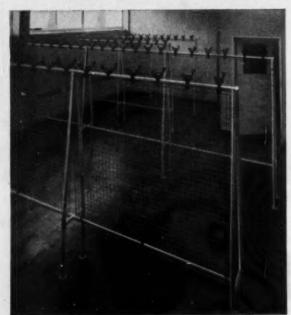
This extremely comprehensive fire protection scheme provides "Safeguard" Hose Reels (fitted in cavities) for use by the occupier and Dry Riser and Foam Inlet Equipment for use by the Fire Brigade.



CHARLES WINN & CO LTD

Telephone: MiDland 7151 (10 lines) Telegrams: WINN, Birmingham

### No more cloakroom problems



# with the FINCH 'CLOFIT'

View of the cloakroom in the Marconi works at Basildon at present nearing completion. Photograph by kind permission of Marconi's Wireless Telegraph Co., Limited.

The Finch 'Clofit' is the answer to all cloakroom 'problems. These cloakroom units are versatile and adaptable, possessing many advantages over traditional cloakroom fittings. The design has been simplified so that these units can be accommodated within most cloakroom plans—and modifications can easily be introduced to meet the individual requirements and special site needs.

Write for our 'Clofit' catalogue.

### FINCH ENGINEERING LIMITED

MEDIUM AND LIGHT CONSTRUCTIONAL ENGINEERING SPECIALISTS

Belvedere Works, Barkingside, Essex

Telephone: Crescent 6626 (P.B.X.)

# LEAD that is Good - with a capital G!



Glynn Brothers Limited have a capital reputation for their milled lead sheet and strips to B.S.1178/1944, for building purposes...lead pipes to B.S.602/1956...chemical lead sheet and pipe to B.S.334/1934 for use mainly in chemical plant or where acid-resisting receptacles and laboratory plumbing are needed.

Silver, copper, lead alloy pipes to B.S.1085/1956, and B.N.F. Ternary alloy No. 2 lead pipe to B.S.603/1941 can also be supplied speedily to all parts of the country.

### GLYNN BROS. LTD.

PARK ROYAL ROAD, LONDON N.W.10, Telephone: Elgar 7011 Other Works: TRAFFORD PARK, MANCHESTER 17 & BILSTON, STAFFS, Telephones: TRAFFORD PARK 1444 and BILSTON 41615 SOUTH WALES WAREHOUSE: PENARTH ROAD, CARDIFF (TEL: 22502)

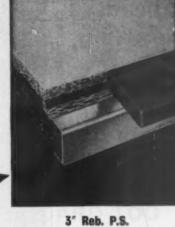
Manufacturers of LEAD SHEET AND PIPE. SOLID DRAWN COPPER TUBES. STEEL TUBES AND FITTINGS. STEEL TUBE FABRICATIONS. MALLEABLE TUBE FITTINGS.

### Seven symbols of progress









3" Rob. P.P







The slab identified by this symbol is our 3" Rebated Channel Reinforced Prescreeded Wood Wool Roofing Slab. It has all the advantages of our 3" Reb., including the unique Thermacoust anticondensation insulated rebate over the steel channel reinforcing strips. It is, however, pre-screeded during manufacture with a hemi hydrate gypsum plaster. Thermal movement is accommodated without trouble because the slabs can move independently in a way that is not possible where continuous screeding is applied after installation. Dry construction becomes possible with the obvious additions of speed, immediate weather protection, and the elimination of construction moisture content: it opens the way for entirely new roofing techniques. Like all Thermacoust roofing slabs, 3" Reb. P.S. has high resistance to fire and good thermal insulation, rated at 0.19

The sound absorption factor at 500 c/s is 0.85.

Please write for full particulars.

B.T.U. with felt applied.

### THERMACOUST

### ROOFING SLABS

20 ALBERT EMBANKMENT LONDON SE11 Telephone Enquiries (Southern)—London: ELMbridge 5778/4/8

Telephone Enquiries (Southern)—London: ELMbridge 5773/4/5 Telephone Enquiries (Northern)—Doncaster 54138 Ex. 25

When supported on inverted "T" or Thermacoust purlins no special fixing arrangements are required. Flat-top purlins or R.S.J.'s call for Type I site fixing clips.

site fixing clips.
Slabs may also be provided with any of the exclusive range of Thermacoust Pre-Clips for fixing copper, SNAPRIB aluminium, slates, tiles or false ceilings.



A member of the Cementation Group of Companies



a true description of a Gliksten door.

### ... a beauty more than skin deep

Gliksten Mark 12 doors are faced with superbly matched West African cedar veneer giving each door an attractive individuality. The beauty of this Gliksten door is more than skin deep. Built, as it is, on the principle that stability does not depend upon individual components but upon a choice of reasonably inert materials perfectly bonded together, the resulting interior ensures beauty of construction as well. Glikstens are the foremost suppliers of flush doors to local authorities, builders and contractors.

Guaranteed for 3 years.

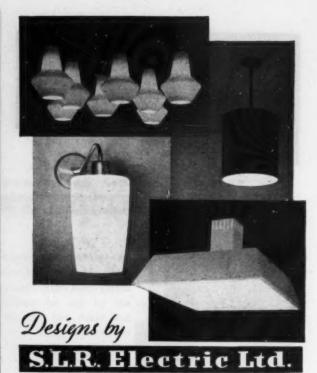
Write for full details and prices

GLIKSTEN DOORS

Cheapest in the long run the best

One of the Gliksten Group of Companies

Gliksten Doors Ltd., Carpenters Road, Stratford, London, E.15 Tel: AMHerst 3300. Liverpool Office: 87 Lord St. Tel: CENtral 3441 Hull Office: 112 Londesborough St. Tel: Hull 16071



Catalogues

available on request—

WELBECK WORKS, WELBECK ROAD SOUTH HARROW, MIDDLESEX

Telephone: BYRon 3273/4



Regd Trade Ha

for FIRE PROTECTION
SOUND ABSORPTION
THERMAL INSULATION
EXTERNAL PROTECTION
COLOUR DECORATION and
ANTI-CONDENSATION TREATMENTS

Pyrok has been used successfully in

SWIMMING BATHS
BREWERIES
KITCHENS
DAIRIES
SCHOOLS
FACTORIES etc.

For further details of this treatment and of the properties of Pyrok apply to:—

### PYROK LIMITED

401-404 Montrose Avenue, Slough Tel.: Slough 24861

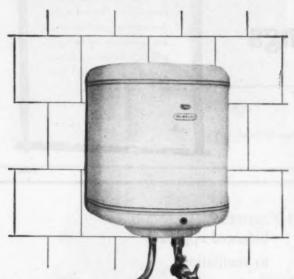
2-5 Old Bond Street, W.I Tel.: HYD 1491



"Express Spray"

AUTOMATIC ELECTRIC WATER HEATER

makes light work of many hands



Loading: 3,000 watts Voltage: 200/220 230/250 A.C. only

Developed from the famous
Heatrae Lido Express Sink Water
Heater, the 'Express Spray'
delivers a continuous supply of
water at a comfortable handwashing temperature. The
heater incorporates the
exclusive "Economy Eye"
visual indication of when
current is 'on', and proof
of low running cost.

The 'Express Spray' is ideal for:

SCHOOLS HOSPITALS FACTORIES CANTEENS

WRITE FOR LEAFLET No. 97

# HEATRAE LTD. NORWICH · NORFOLK · NOR 29A

Telephone: Norwich 25131 Telegrams: Heatrae, Norwich



#### AND STANDARD TOO

All high standard pipe fittings from

## KONTITE

Kontite's range of 22,000 standard fittings for copper tube is the biggest in the business. Most of these can be supplied straight from stock. Specials take only a little longer. That's what makes Kontite service the best in the business. First class materials and the proved efficiency of Kontite Gunmetal fittings are your guarantee of complete reliability.









KAY & CO. (ENGINEERS) LTD.
BOLTON BRASS WORKS · BOLTON · LANCS.
TELEPHONE: BOLTON 3041

# There is nothing to equal

LEAD

for chimney flashings

LEAD DEVELOPMENT ASSOCIATION

18, ADAM STREET, LONDON, W.C.2. Telegrams: Leadevep, Rand, London. Telephone: WHItehall 4175

h

#### THE LEAD SHEET & PIPE TEGHNICAL INFORMATION BUREAU

advises on the use of Lead in building work. Most of the many uses are detailed in the Association's publications, and in addition the Bureau's technical officers are always glad to give individual assistance.

54/68



HILLS (WEST BROMWICH) LIMITED

# balanced approach to ventilation

In planning ventilation, many factors demand study.

Outlet area, airflow, velocity, overall volume, air temperature, seasonal fluctuations. All these must be brought into balanced relationship before the type, location and number of ventilators is finalised. Hills are continuously assessing such factors, opening the way to better working conditions—better production—in foundries, rolling mills, factories.

Let Hills Technical Department answer your ventilation problems.

Roof ventilating shutters



H

ALBION ROAD, WEST BROMWICH, STAFFS.
Telephone: West Bromwich 1811 (15 lines)

London: Chapone Place, Dean Street, W.1

Telephone: Gerrard 0526/9

Branches at: Manchester, Bristol, Newcastle-on-Tyne, Glasgow

# IT'S HARDLY SURPRISING...



that more and more Architects and Builders are specifying the

# SPRING CONTROLLED

# UP & OVER DOOR GEAR

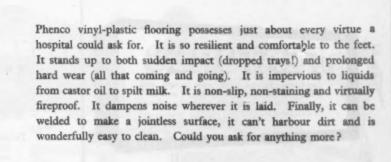
because they know that Suparise is exceptionally robust, reliable and easy to fit. Available for new installations, with a choice of Aluminium Alloy or selected Timber Doors; or for converting existing hinged doors to 'Up & Over' Doors.

PRICE £11.10.0. (Gear only).

Alternatively complete Batley Up & Over, Doors can be supplied in ribbed Aluminium Alloy (£20) or exterior grade Mahogany Ply (£19), or Roller Shutter doors in selected timber laths.

Generous Trade Terms available ,
Brochure from :- ERNEST BATLEY LTD.
63g, Colledge Rd, Holbrooks, Coventry Tel: 89245

#### "Haven't they heard about PHENCO floors?"





VINYL PLASTIC FLOORING

For operating theatres and labour wards, there is a special grade which overcomes the danger of static explosion and low tension shock. For further details, write or 'phone:—
PHOENIX' RUBBER CO. LTD.,
Trading Estate, Slough, Bucks.
Slough 22307/9.

OA/5512

# the bricks for the job SANDLIME BRICKS

# FOOTINGS

Sandlime Bricks are available in Special Purpose and other load bearing grades to suit your job; of guaranteed strength and thoroughly durable.

# FACINGS

Sandlime Bricks of facing quality (Class A of B.S. 187 - 1955) give maximum light reflection, are self-cleaning when exposed to rain, and are durable under the most severe conditions.

# FEATURES

Sandlime Bricks give new scope and freedom. In addition to the "natural" whites, a wide range of permanent colours is available.

#### SANDLIME BRICKS FOR INDUSTRIAL, DOMESTIC AND AGRICULTURAL BUILDING



Buy your bricks from members of The Sandlime Brick Hanulacturers Assoc. Ltd. 73/78 High Holborn, London, W.C.I. Tel: HOL 5434. A list of members and technical ilterature can be obtained from the Secretary.

The Sandlime Brick Industry is progressive and utilises continuous research carried est both by individual manufacturers and by the Sandlime Brick Division of the Chalk Lime and Ailled



An increasing number of responsible people are, nowadays, turning to the professional man for advice on questions in relation to their personal affairs which call for up-to-date knowledge of all kinds of specialised subjects from A to Z.

The United Kingdom Provident is able to provide you with every kind of information on all topics relating to Life Assurance. We have over 100 years' experience and our latest figures were a record. Our current bonus rates are 52/and 53/- per cent per annum and they are compound.

We have booklets which are full of useful information and may prove profitable to you. Send for them today.

# UNITED KINGDOM PROVIDENT INSTITUTION

for Mutual Life Assurance

33-36 Gracechurch Street, London, E.C.3

Telephone: Mansion House 6543





# RAWLINGS BROS

LIMITED

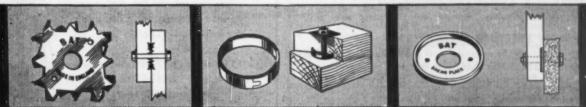
ENQUIRIES INVITED FOR

Conversions. Decorations Electrical Installations

RAWLINGS BROS LTD. 65 GLOUCESTER ROAD, LONDON , S.W.7. Telephone FRE 8161

ESTABLISHED 1887







AUTOMATIC PRESSINGS LTD. 'BAT' WORKS, BLACKHEATH, BIRMINGHAM.



# WHEN YOU'RE CALLED IN . . .

for advice on efficient heating or cooling controls you're bound to recommend

# PULLIN THERMOSTATS

#### FLOOR LIMIT THERMOSTAT (L4)

has been specially developed to control under-floor heating installations to an accuracy of plus or minus one degree. It is a precision instrument, sealed against dust and moisture, and is used in



conjunction with the Pullin A2 Room Thermostat. Once set and installed, it usually requires no further attention.

## ROOM THERMOSTATS AND REVERSE ACTION THERMOSTATS

Two models available — the A2/W and A2/WNL. Precision built to critical specifications and designed to control electric under-floor heating, storage heaters, tubular heaters, warm air systems, etc. Reverse action Thermostats, models A2/RA



and A2/RANL, have a proven record after extensive testing. Designed to meet the demand for cooling applications in industry and agriculture, they are accurate to the finest limits.

#### YOU WILL ALSO WANT INFORMATION

on further additions to the wonderful range as they are developed during the year—a range of instruments that will provide accurate control for all types of heating or cooling equipment whether industrial or domestic.

#### THINK OF PRECISION THERMOSTATS-

THINK OF R. B. PULLIN

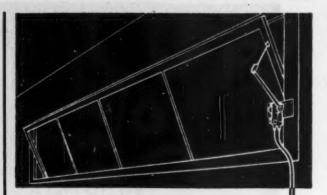
The A2 Thermostat has been selected by The Council of Industrial Design for exhibition in The Design Centre.

Write for Technical Leaflets to

#### R. B. PULLIN & CO. LTD.

THERMOSTAT DIVISION, PHOENIX WORKS, GREAT WEST ROAD, BRENTFORD, MIDDLESEX.

Telephone: ISLeworth 1212. Cables: Pullince Wesphone London



the situation



HYDRAULIC ACTUATOR

# opens and closes

The Armstrong Actuator can be installed by the use of elementary engineering knowledge, simple instructions and a few stock embodiment items. At low cost, you can have an efficient hydraulic circuit that, once charged will function indefinitely. The Armstrong Actuator is ideal for window operation and its "instant action" operation reduces fire risk. For further information, write today for leaflet—APL 51/12





ARMSTRONG PATENTS CO.

EASTGATE, BEVERLEY, YORKSMINE

Tel: Beverley 82212 (6 lines)



IN EVERY SPECIALISED FIELD

ONE LEADER

.IN CHAIN LINK FENCING-ITS.

# FLEXATELLA

Ask the Big Suppliers and Users!

J. B. CORRIE (FLEXTELLA) LTD .

PETERSFIELD

HANTS

Tel: PETERSFIELD 1255/9



The Banbury Big 20 range of Industrial Buildings instantly and economically solves all your accommodation problems—small or large. Supplied to Councils and Industry all over the country. Portable yet permanent—easily and quickly erected—full planning, siting and erection service available. And the cost? The Basic price is from only 8s. 6d. per sq. ft. One-third the cost of brick! Widths: 20ft. 9in., 41ft. 6in., 62ft. 3in., etc.—any length. Here are just a few examples of the wide adaptability of the Big 20 range: Warehouse Factory, Village Hall, Cafe, Canteen, Shop, Sports Pavillon Workshop.

Show Gardens: BANBURY; RYTON, COVENTRY and ORPINGTON, KENT (Opp. Stn.). Open all Weekends. Saturday/Sunday 5 p.m.

Write for booklet.

PORTABLE CONCRETE BUILDINGS LTD. Ironstone Works, Aynho Road, Adderbury West, Banbury, Oxon. Banbury 4242 & Orpington 31220



The safest door for industry. Trucks of all sizes and kinds can be wheeled through without causing damage to the door or receiving damage from it. Personnel too are equally protected and large port-holes give excellent visibility when approaching from either side.

The Flexidor is the original rubber door. Send for further details today.

# BIRMINGHAM & BLACKBURN Construction Co. Ltd.

Armoury Close, Bordesley Green, Birmingham i and also at George St. West, Blackburn



'Bondenn' Reinforcement ends the need for thick, expensive brick walls. 43" brickwork strengthened with 'Bondenn' in many cases replaces ordinary 9" walls. Result - substantial savings in bricks, cement, labour and time.

'Bondenn' in brickwork increases the resistance to load by 68% - an invaluable advantage when foundations stand in made-up ground or doubtful subsoil and in structures where heavy and intermittent loads are applied.

'Bondenn' consists of rolls of straight longitudinal steel wires of 25/30 tons tensile secured with mild steel spacing

wires. Hot spelter galvanising after fabrication ensures high resistance to deterioration.



Write now for full technical information to

Boulton & Paul Ltd.

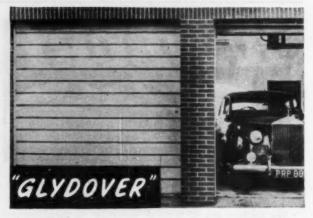
NORWICH
P.O. Box 5, Riverside Works, Norwich. NOR 72A
Telephone: Norwich 25251. Telegrams: Boulpaul, Norwich
84-86 Baker Street, London, W.I. Telephone: HUNter 3281
Telegrams: Boulpaul, Wesdo, London
TIPTON
P.O. 11, Midland Works, Tipton, Staffs
Telephone: Tipton 1191/2 Telegrams: Boulpaul, Tipton
B.30

## **ARCHITECTS** ASSISTANT **ARCHITECTS**

A leading firm of London Consulting Engineers have vacancies in their Architect's Department (Chief Architect: Mr. K. A Brundle, F.R.I.B.A., A.A. Dipl.) for work in a wide and interesting field of Industrial Projects. These are permanent and pensionable positions; five-day week, luncheon vouchers.

Applications, stating qualifications, experience and present salary should be sent in confidence, to the

Personnel Manager, W. S. Atkins & Partners, 158 Victoria Street, London, S.W.1



# The best domestic garage door in the world



Made of rust-resisting steel, can be power operated by various remote control methods. Glydover Doors are suitable for all types of garages. High quality of design and materials ensures lasting, trouble-free operation. Write for leaflet reference AJ355

BOLTON GATE CO LTD . BOLTON . LANCS

Branches at Belfest, Birmingham, Bristal, Dublin, Liverpool, London, Manchester, Newcastle-upon-Tyne

#### CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advertisements should be addressed to the Advertisements and the control of the Advertisements and the control of the Christmas holiday. The latest dates for receiving advertisements for the December issues are as follows:

December 15 issue—Thursday, December 8. December 22 issue—Wednesday, December 14 December 29 issue—Tuesday, December 20.

Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

AIR-MAIL SERVICE available on request. In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatiched by air-mail on Wednesday of each week (one day prior to A.J., publication date). The cost of this special service to Overseas subscribers will be 5s. for four weeks (1s. 3d. for each additional week) and prepayments should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

#### Public and Official Announcements

Public and Official Announcements

Jos. per inch; each additional line 3s.

BOROUGH OF BASINGSTOKE
BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited from Associates,
B.I.B.A., for the post of SENIOB ASSISTANT
in the Architect's Department of a town which is
growing rapidly.

The work is varied and interesting, but applicants must have gained considerable housing
knowledge. Experience with tail flats an advantage. Salary within range £1,46-£1,310 according to experience. N.J.C. conditions. Post pensionable. Medical examination. Casual user car
allowance. Housing available in due course.
Assistance with removal expenses. Five-day week.
Details giving qualifications, age, training, experience, etc. and names and addresses of two
referees so be sent to the Borough Architect,
Bric Almond, Dipl. Arch., A.B.I.B.A., Municipal
Buildings, Basingstoke, Hants, by 16th December,
1960.

L. WOMERSLEY.

L. WOMERSLEY, Town Clerk.

BOROUGH OF ENFIELD
BOROUGH ENGINEER & SURVEYOR'S
DEPARTMENT
Non-County Borough in the County of Middlesex.
Population 109,700. Area 12,400 acres,
Applications are invited, from suitably qualified persons, for the following permanent
appointments:—
1. ASSISTANT ARCHITECT—A.P.T. IV—
21,440—21,310 plus London weighting.

Adoptications are invited, from satisfy quantitative persons, for the following permanents:

1. ASSISTANT
21,140-21,310 plus London weighting.
2. ARCHITECTURAL ASSISTANTS (TWO)
-A.P.T. III-2950-21,140 plus London weighting.
The commencing salary will be fixed at points within the scale commensurate with qualifications and experience.
There is a large varied programme of work, including the redevelopment of Clearance Areas and other areas scheduled for Comprehensive Development.
Housing accommodation may be made available in appropriate cases. The Council is also prepared to consider 100 per cent. advances to successful applicants for house purchase within the Borough.

Saturday moreings are normally free from duty. Application forms, obtainable from H. D. Peake, M.Sc. (Eng.), M.I.C.E., Borough Engineer and Surveyor, 7. Little Park Gardens, Enfield, Middlesex, must be delivered to the undersigned as soon as possible.

CYRIL E. C. R. PLATTEN,
Town Clerk.

Public Offices.

Gentleman's Row.

Buffeld. Middx.

ROYAL BURGH OF DUMFRIES
DEPUTE BURGH ARCHITECT
Applications are invited from qualified Architects, preferably with experience in Redevelopment Work.
The appointment, within the salary scale £1.140
-£1.220 (i.e., £100 in excess of Admin. Grade D of the N.J.L.C. Scheme) will be subject to the Town Council's Superannuation Scheme and N.J.L.C. Conditions of Service, and the successful applicant will require to pass a medical examination.

applicant will require to pass a house tion.

If required, the tenancy of a Council house will be given to the successful applicant.

Applications, stating age, qualifications and experience, together with copies of three recent testimonials, or the names of three referees, should be lodged with the undersigned not later than 16th December, 1960.

GEORGE D. GRANT.

Town Clerk.

Municipal Chambers, Dumfries. 23rd November, 1960.

LANCASHIRE COUNTY COUNCIL
COUNTY ABCHITECT'S DEPARTMENT
SENIOR ASSISTANT ARCHITECTS. N.J.C.
Scale "B." £1,506 p.a. pluz £65 (1)/£56 (2) to
£1,670 p.a. (starting salary according to experience).
Applications are invited from experienced
Registered Architects, required on the permanent
staff of the County Architect, to deal with a
wide variety of major projects, including large
Technical Colleges, Magistrates Courts, Police
Training Schools, etc.
Application forms and details of appointment
obtainable from the County Architect, P.O. Box
26, County Hall, Preston, returnable by 20th
December, 1966.
URBAN DISTRICT COUNCIL OF CORBY

URBAN DISTRICT COUNCIL OF CORBY
Applications are invited for the undermentioned appointments in the Architectural Section of the Engineer and Surveyor's Department:—
(i) SENIOR ARCHITECTURAL ASSISTANT Applicants must be qualified Architects of not less than five years' experience (including the period of theoretical training). Salary within Grade A.P.T. III/IV (#960—#1,140—#1,310) according to experience.

Grade A.P.T. III/IV (£960—£1,140—£1,310) according to experience.

(ii) JUNIOB AECHITECTURAL ASSISTANT Salary Grade A.P.T. I (£645—£85) or A.P.T. II (£815—±960) according to qualifications and experience.

Corby is a rapidly expanding town and the Council's building programme is substantial and varied, with opportunities for good experience.

The provisions of the Local Government Superannuation Acts, 1937/53, will apply to this appointment.

annuation Acts, 1937/53, will apply to appointment.

Housing accommodation will be made available to the successful candidates, if married.

Forms of application may be obtained from the undersigned, to whom they should be returned not later than the first post on Friday, 16th December, 1960. Testimonials will be required only from applicants selected for interview.

G. B. BLACKALL,

Clerk of the Council.

Council Offices, Corby, Northants. 22nd November,

22nd November, 1990.

METROPOLITAN POLICE
RECEIVER'S OFFICE
requires staff for interesting and varied work in
connection with an extensive Police Building
Programme.
LEADING DRAUGHTSMEN (New Works)
LEADING DRAUGHTSMEN (Sanitary Engi-

LEADING DRAUGHTSMEN (Sanitary Engineering)
Salary: £980 p.a. rising by annual increments to £1.145 p.a.
Qualifications required: Intermediate-R.I.B.A., Higher National Certificate (New Works), Higher National Certificate (Sanitary Engineering) or equivalent training.
BASIC GRADE DRAUGHTSMEN (New Works)
BASIC GRADE DRAUGHTSMEN (Sanitary Engineering)
Salary: £500 p.a. at age 21 rising by annual increments to £980 p.a. (maximum salary on entry £395 p.a. being age 28 point on scale.)
Qualifications required: Ordinary National Certificate or to be of Intermediate-R.I.B.A. standard (New Works), Ordinary National Certificate (Sanitary Engineering) or equivalent training.

standard (New Works), Ordinary National Certificate (Sanitary Engineering) or equivalent training.

Application forms can be obtained from Chief Clerk, Architect & Surveyor's Department, New Scotland Yard, S.W.I.

4506

BOROUGH OF HESTON AND ISLEWORTH Applications are invited for the undermentioned appointments in the Borough Engineer and Surveyor's Department:—
(4) SENIOR PLANNING ASSISTANT Salary in accordance with A.P.T. Grades II-III (£315—£1.140 plus London weighting).
(b) PLANNING ASSISTANT Salary in accordance with A.P.T. Grades II-II (£45—£1.240 plus London weighting).
Applicants should have passed the Intermediate examination of the Town Planning Institute or other equivalent and have had experience in a town planning department of a local authority.

Commencing salary to be in accordance with

authority.

Commencing salary to be in accordance with qualifications and experience.

The Council is unable to assist the successful candidates with housing accommodation.

Applications are to be submitted by 19th December, 1960, on forms to be obtained from and returned to the Borough Engineer and Surveyor, 88 Lampton Road, Hounslow.

D. MATHIESON,
Town Hall.

Town Hall, Hounslow, Middlesex.

Hounslow, Middlesex.

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DBPARTMENT
ARCHITECTURAL ASSISTANTS (within
salary range of £815—£1,146 p.a.).

Applications are invited from Architectural
Assistants for appointments to the permanent
staff of the County Architect's Department, which
is engaged on a large and varied programme of
major projects.

It is desirable that applicants should have
attained at least Intermediate R.I.B.A. standard
and, within this stage of qualification, to have a
reasonably varied experience.

Application forms and desaits of appointment
obtainable from the County Architect, P.O. Box
26, County Hall, Preston, and are returnable by
20th December, 1960.

REBUILDING OF ST. THOMAS'S HOSPITAL ARCHITECTS
Salary Scale

A. Senior Assistant Architect

£1,300 × 65 to £1,600

+ £50 Londom Weighting.

B. Assistant Architect

architects who have recently completed a full-time course at a recognised School of Archi-tecture.

Previous hospital experience is not essential.

Applications should be returned to me within two weeks indicating post applied for and giving particulars of education, qualifications and experience, together with the names of two referees.

W. FOWLER HOWITT, A.R.I.E.A.,
45 Lambeth Palace Road,
London, S.E.1.

BOROUGH OF WILLBSDEN
Applications are invited for the following permanent appointment.

ABCHITECTURAL ASSISTANT within Grade
A.P.T. II (2815-2950 p.s.).
London weighting is payable in addition to the above salary.
Candidates should have passed the Intermediate Examination of the R.I.E.A.
A programme of interesting and varied works in expected to continue for many years and opportunities are offered to imaginative designers of any age with a contemporary and practical outlook.

The appointment will be approximated.

outlook.

The appointment will be superanuable and subject to the National Conditions of Service.

The Council is unable to sesist with housing accommodation.

Forms of application and conditions of appointment may be obtained from the Borough Englineer and Surveyor. Town Hall. Dyne Road, Kilburn, N.W.6. Applications to be returned to the undersigned not later than 10 a.m. on Monday, 12th December, 1968.

R. S. FORSTER.

R. S. FORSTER, Town Clerk

COUNTY BOROUGH OF ROTHERHAM
ARCHITECTS
Applications are invited for the following

ARCHITECTS

Applications are invited for the following appointments:
(a) ARCHITECTURAL ASSISTANTS, A.P.T. I £46-£315) to A.P.T. III £760-£1,140).

(b) SENIOR ASSISTANT ARCHITECT, A.P.T. IV £1,140-£1,310).

The department has a varied and interesting programme of architectural work and candidates for (a) are required to have passed Parts I and II of the B.I.B.A. final examination and (b) to be Associate Member of the E.I.B.A. with good general experience in design and construction. The commencing salary in the grades will be according to capabilities and experience. Housing accommodation will be available if necessary for the higher grade appointment. Applications is be endorsed "Architects, taking age, qualifications and details of experience, together with names of two referees, should be received by me not later than Wednesday, 21st December, 1969.

Canvassing will disqualify.

JOHN 8. WALL, Town Clerk.

Municipal Offices, Rotherham. November, 1968.

4631

WEST SUPFOLK COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT Applications are invited from suitably qualified persons (B.I.B.A. Intermediate standard) for the post of ARCHITECTURAL ASSISTANT within A.P.T. Grade II (2815-2950).

The person appointed will be required to work in a small team on a varied programme of Education, Police and Health projects. Five-day week.

week.
Application forms obtainable from The County
Architect, 13 Westgate Street, Bury St. Edmunds,
to be returned as soon as possible.

4549

HAYES AND HARLINGTON URBAN

HAYES AND HARLINGTON URBAN
DISTRICT COUNCIL
Applications are invited for ARCHITECTURAL
ASSISTANTS (2). Salary Grade APT.II. 28155969 per annum plus appropriate London Weighting. Candidates should have passed the intermediate examination of the R.I.B.A. and must
have good general architectural experience. Five
day week. Housing accommodation will be made
available for one of the appointments. Further
particulars and conditions of service, and form
of application obtainable from the undersigned,
which when completed must be retarned by
the 14th December, 1960.

GEORGE HOOPER.

Clerk and Selector.
Town Hall.

Town Hall, Hayes, Middlesex.

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
ASSISTANT ARCHITECTS, A.P.T. V. 21,316
21,480 p.a. (starting salary according to er

Applications are invited from qualified Archi-tects of initiative, keen on design and modern constructural methods, to work on a large and

varied programme.

Application forms and details of appointm obtainable from the County Architect, P.O. 25, County Hall, Preston, returnable by December, 1960.

AUSTRALIA
THE UNIVERSITY OF NEW SOUTH WALES,
SYDNEY
LECTURER—SCHOOL OF ARCHITECTURE
The University invites applications for appointment to the position of LECTURER in the SCHOOL OF ARCHITECTURE.
Salary: £A1,799 range £A2,469 per annum.
Commencing salary according to qualifications and experience.
Applicants must be registered architects and possess a degree, diploma or equivalent qualifications and be eligible for membership of R.A.I.A. or R.I.B.A.
The successful applicant will lecture, examine and undertake research in all grades of history of architecture and assist where required with classes in architectural subjects at undergraduate level.
Applicants should preferably have travelled

Applicants should preferably have travelled widely in the study of historic and modern architecture. Lecturing and teaching experience would be an advantage.

First class ship fares to Sydney of the appointee and family will be paid.

Subject to passing a medical examination, the appointee will be eligible to contribute to the State Superannuation Fund.

The appointee will be eligible for 12 months' study leave on full salary after six years' service.

vice.

Four copies of applications, together with the names of two referees, should be lodged with the Agent General for New South Wales, 56, Strand, London, W.C.2. and a copy forwarded by airmail in an envelope marked "University Appointment" to the Bursar. The University of New South Wales, Box 1, Post Office, Kensington, New South Wales, Australia, before 13th Lanuary, 1951.

COUNTY BOROUGH OF CROYDON

ARCHITECTURAL ASSISTANTS
Applications are invited for two appointments under the School Architect (C. T. Averst, A.R.I.B.A.). An applicant with suitable building surveying experience would be considered. The work includes major and minor educational building programmes of new construction and modernisation.

Salary scale—A.P.T. I/III/III/V (£670 to £1,355 p.a.); commencing salary will depend on qualifications and experience; pensionable posts; five-day week (38 hours).

Bessential User " car allowance payable when graded in A.P.T. IV with " Final " qualification. Housing—Advances up to 100 per cent. of Borough Valuer's valuation will be available in approved cases for the purchase of a suitable house in Croydon.

Further particulars and application forms from the School Architect. 38. High Street. Croydon. Closing date 19th December, 1960.

BOROUGH OF SOLIHULL

APPOINTMENT OF LANDSCAPE ARCHITECT Applications are invited from members of the Institute of Landscape Architects for appointment of Landscape Architects in the Borough Engineer & Surveyor's Department at a salary in accordance with A.P.T. Grade IV—21,140 × 255 (2) × 650 (1) to £1.310.

The rapid growth of the Borough has necessitated the development of public open spaces and playing fields, as well as the landscaping of housing estates, etc.

Half the reasonable cost of removal expenses will be paid, and where applicable housing accommodation made available as soon as possible.

possible.

The amointment is subject to the provisions of the Local Government Sunerannuation Acts; the National Scheme of Conditions of Service a medical examination and to one month's notice on either side.

Applications, giving full particulars as to present and past experience, together with the names and addresses of two referees, should be submitted to the Borough Surveyor, 90. Station Road, Solihull, not later than Tuesday, 20th December, 1960.

W. MAURICE MELL.

The Conneil House, Solihull, 25th November, 1960.

BOROUGH OF EALING EXTERNAL PAINTING WALFORD SECONDARY SCHOOL BENGARTH ROAD, NORTHOLT lets are invited for the above-men Tenders ntioned

work.

Specification and Tender Form from Borough
Braineer, Town Hall, Ealing, W.5. Closing date
22nd December, 1960.

P. J. COPE-BROWN. E. J. COPE-BROWN, Town Clerk, 4548

BOROUGH OF BACUP
APPOINTMENT OF ARCHITECTURAL
ASSISTANT
Applications are invited for the above appointment in the Borough Engineer's Department.
Salary—A.P.T. Grade II (2815-296 per annum). Commencing salary will depend upon age, experience and qualifications.
Housing accommodation will be provided, if necessary.

Application forms obtainable from me. Closing date, noon, 19th December, 1960.

A. D. BOND,
Town Clerk.

Municipal Offices.

COUNTY BOROUGH OF HASTINGS
Applications are invited for the following
oppointments in the Borough Engineer's Depart-

ASSISTANT ARCHITECT, A.P.T. III (£960-£1,140 per annum) for education

(£960-£1,140 per annum) for education projects.

(b) ENGINEERING ASSISTANT, A.P.T. II (£815-£960 per annum).

Candidates must be qualified in accordance with the Scheme of Conditions of Service, and the point of entry in the Grade will be dependent on experience.

Housing accommodation will be available if required.

Applications, stating age, qualifications, experience, present and previous appointments and salary, and the names of three referees, to be delivered to the Borough Engineer, 37, Wellington Square, Hastings, not later than Wednesday, 21st December, 1960.

Canvassing will disqualify.

N. P. LESTER.

Town Hall.

Town Hall.

Hastings.

FIFE COUNTY COUNCIL

COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for appointment

as:

(a) QUALIFIED ARCHITECTS—Salary Scale.
£1.096—£1.366 per annum.

(b) ARCHITECTURAL ASSISTANTS—Salary Scale: Admin, Grades "A" and "B," t.e.
£855—£990 per annum.

Candidates should have contemporary outlook and be Associates of the R.I.B.A. Housing accommodation may be available. Superannuation Scheme. Applications, stating post applied for, details of age, experience, qualifications, present position and salary, accompanied by copies of recent testimonials by 28th December, 1950, to the undersigned. No canvassing.

MATTHEW POLLOCK.

County Clerk.

County Buildings,
Cupar, Fife.

COUNTY COUNCIL OF ANGUS
Vacancies exist within the department of the
County Architect, J. B. Yates. A. R. I. B. A... for
ARCHITECTS and ARCHITECTURAL ASSISTANTS who will be given responsibility and
apportunity for original design on new and varied
work for all Departments of the County Council,
and Joint Committees associated therewith.
Salaries will be within the following grades:

(1) Senior Architects Grade: £1,260 × £55—
£1,490.

(2) Architects Grade: £1,040 × £55—£1,315.

21.490. Architects Grade: £1,200 × £55-£1,315.

(2) Architectural Assistants Grades: £795-£1,075 and £1,040-£1,120.
Applicants for Grades 1 and 2 must be A.R.I.B.A., and for Grades 1 and 2 must be A.R.I.B.A., and for Grade 3 should have passed the Intermediate R.I.B.A.
A generous car allowance will be payable with Grades 1 and 2 and housing accommodation will be available in due course.
Application forms and conditions of appointment can be obtained from the undersigned to whom they are to be returned by Thursday, 22nd December, 1960.

IAN A. MACKNIGHT.
County Clerk.

County Buildings, Forfar. 29.11.60.

CITY OF CARDIFF
CITY ARCHITECT'S DEPARTMENT
ARCHITECTURAL, AND OUANTITY
SURVEYING STAFF
Applications are invited for the following

Applications are invited for the following appointments.

(a) SENIOR ASSISTANT ARCHITECT.

A.P.T. Grade 3/4, 2960—21.310.

(b) ARCHITECTIRAL ASSISTANT.

A.P.T. Grade 2, 2815—2960.

(c) JUNIOR ARCHITECTURAL ASSISTANT.

A.P.T. Grade 1 2645—2815.

(d) ARCHITECTURAL DRAUGHTSMAN.

Miscellaneous Grades 1/6, 2450—2825.

(e) SENIOR ASSISTANT QUANTITY

SURVEYORS

A.P.T. Grade 4, 21.140—21.310.

General Conditions of annointment may be obtained from the UNDERSIGNED.

The commencing salaries will be subject to qualifications and experience.

Annications afacting age, qualifications, and experience together with the names of two referees, should be delivered to me not later than the 16th December, 1960.

S. TAPPERJONES.

8. TAPPER-JONES. Town Clerk. City Wall. Cardiff. November, 1960.

URBAN DISTRICT OF EBBW VALE
ARCHITECT'S DEPARTMENT
APPOINTMENT OF ABCHITECTURAL
ASSISTANT
Applications are invited for the above appointment in the Architect's Department on Grade
A.P.T. II (£815—2860). Applicants to be Intermediate R.I.B.A. or Intermediate R.I.C.S.
(Building)

mediate R.I.B.A. or Annual Company of the Department is engaged on a variety of work including a New Civic Centre, Housing. Redevelopment proposals, etc.
Alternate Saturday mornings free. Canteen facilities. Pension Scheme. Medical examina-

Applications, with usual information and names of two referees, to be received by the undersigned not later than Saturday, 31st December, 1960.

HOWARD J. WILLIAMS.

Clerk of the Council.

District Council Offices, The Walk, Ebbw Vale, Mon.

ARCHITECTURAL ASSISTANTS

ENGLISH ELECTRIC invite applications for an appointment as an Architectural Assistant. The post offers interesting and varied work on current office laboratory and industrial expansion at present being carried out by the Architects Department at Whetstone, near Leicester. The successful applicant will be 'of Intermediate R.I.B.A. standard, able to use his initiative and work with a minimum of supervision and have a sound knowledge of design and construction. Previous industrial experience is not essential although it would be an advantage.

The Works is situated in rural surroundings with transport facilities available to the Leicester and Rugby areas.

The post offers good prospects to the right man and is permanent. Enquiries giving details of age, qualifications, experience and present salary should be addressed to the Technical Staff Officer English Electric Company Ltd., Cambridge Road, Whetstone, near Leicester, quoting reference AJ 1991E.

COUNTY BOROUGH OF BLACKPOOL

SURVEYOR'S DEPT
Applications are invited from ARCHITECTS
and QUANTITY SURVEYORS of enthusiasm and
a capacity for hard work, to work in the
Architects' Section of this Department (Chief
Assistant—Architectural Services—A. G. Beckett,
A.B.I.B.A., Dip.T.P., A.M.T.P.I.) on an interesting and varied programme of buildings.
A five-day week is worked.
Vacancies exist for:—
ASSISTANT ARCHITECTS, A.P.T. Special.
£840—£1.145.

Vacancies exist

£840-£1,145. ARCHITECTURAL ASSISTANTS, A.P.T. II. ARCHITECTURAL ASSISTANTS, A.P.T. I.

ARCHITECTURAL ASSISTANTS, A.P.T. 1, £645-£315.

SENIOR ASSISTANT QUANTITY SURVEYORS, A.P.T. Special, £340-£4,145.

Application forms from Arthur Hamilton, B.Sc., A.R.I.B.A., Borough Surveyor, P.O. Box 17, Municipal Buildings, Blackpool.

4141

AIR MINISTRY Works Designs Branch requires in LONDON and PROVINCES, ARCHITECTURAL ASSISTANTS with adequate training and drawing office exp. O.N.C. (Building) an advantage. Work includes site layor's, sketch plans, working drawings and details for variety of technical and domestic buildings in permanent and semi-permanent construction. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. Five-day week with 13 days' paid leave per year initially. Overseas tours for which special allowance, granted.

Salary: in Loudon Polymanses from £805 (age 25) to £930 p.a., somewhat lower in PROVINCES. Commencing salary dependent on age, quals, and exp. Applicant, who must be natural born British subjects, should write (quoting Order Vo. Kines Cross 297) to Air Ministry, W.G.d. Lacon House. Theobalds Road, London, W.L. or to any Employment Exchange giving age details of training, quals., full particulars of Candidates selected will normally be interviewed in London and certain expenses reimbursed. 3608

AUSTRAIJA

THE UNIVERSITY OF NEW SOUTH WALES
NEWCASTLE UNIVERSITY COLLEGE
VACANCIES FOR ACADEMIC STAFF
The University invites applications for appointment to the following position at Newcastle University College.

LECTURER IN ARCHITECTURE. Salary range: £41,759-£42,464 p.a.
Subject to passing a medical examination, appointe will be eligible to contribute to the State Superannuation Fund.
First-class ship fare to Sydney of appointee and his family will be naid.
Four copies of applications, including the names of two referees, should be lodged with the Agent General for New South Wales. So, Strand. London, W.C.2. and a copy forwarded by airmail in an envelope marked "University Appointment" to the Bursar, The University Appointment to the Bursar, The University Appointment to the Bursar, The University of New South Wales. So I. Post Office. Kensington. New South Wales, So University of New South Wales, So University of New South Wales, Australia, before 13th January. 1961. Candidates outside the United Kingdom and Ireland need only submit one copy of their applications to the London address.

4759



\* AJ \* readers \* are invited \* to send now for \* illustrated category of our \* illustrated category of our of books: full descriptions \* of all our current publications \* PRESENT BOOKS
THIS
THE ARCHITECTURAL PRESS XMAS 8 QUEEN ANNE'S GATE SW1

SHOREDITCH BOROUGH COUNCIL has a vacancy for a qualified

# ASSISTANT ARCHITECT

has a vacancy for a qualified Assistant Architect for varied and interesting programme of important Public Buildings.

Salary £1185 - £1355 p.a.

Applications to:

BOROUGH ARCHITECT, TOWN HALL, E.C.1.



... specify BRUNOPHEN for complete eradication!

In all cases of insect or fungus damage to timber, the specification of BRUNOPHEN—the penetrating, persistent and water repellant eradicator will effectively put an end to the trouble. Furthermore, BRUNOPHEN is used to preserve replacement timbers from future attack.

Whenever you are consulted on treatment in such cases, you can

confidently specify brunophen.

A specially printed detailed Specification has been prepared to simplify the task of Architects and Surveyors when advising on woodworm and

dry rot eradication.

These are available from address below, please state how many copies you require.



PRESERVATION DEVELOPMENTS LTD

23 SLOANE STREET · LONDON SW1

Suppliers of chemicals for preservation of timber

TELEPHONE: BELGRAVIA 4114-6 - TELEGRAMS: ADDOOM - LONDON

Basic Grade architects
Salary:—

£330 0s. 0d. p.s. at age 25 rising by
annual increments to £1,300 0s. 0d.
p.s. (Maximum salary on entry:
£1,125 0s. 0d. being age 34 point on

p.s. (Maximum salary on entry: £1,125 se. 6d. being age 34 point on scale).

Qualifications
required:— Applicants must be registered Architects.
Application forms can be obtained from Chief Clerk, Architect & Surveyor's Department, New Scotland Yard, S.W.1.

BEITISH OVEREERAS AIRWAYS CORPORATION invites applications for TWO STAFF ARCHITECTS for their Central Planning Group stationed at LONDON AIRPORF within a salary range of £1,130 to £1,567. Candidates should be members of the R.I.B.A. The position will carry responsibility for running big projects through Consulting Architects and Engineers, and applicants should have the ability to tackle large scale planning work. They should posees a contemporary design outlook allied with a good sketch presentation technique and competence in report writing. Applicants must be prepared to visit overseas stations for short periods. Apply: Recruitment Manager, B.O.A.C., London Airport, Houmslow, Middlesex.

CITY OF NOTTINGHAM

ESTATES & HOUSING COMMITTEE APPOINTMENT OF ARCHITECTURAL ASSISTANTS

Applications are invited from Architectural Assistants who have passed the Intermediate Examination of the R.I.B.A. for posts in the Chief Architect's Section of the Estates Department at salaries in:

(a) A.P.T. GRADE II (£815—£950).

(b) A.P.T. GRADE II (£815—£950).

(c) A.P.T. GRADE II (£845—£815).

There is a large and interesting programme of comprehensive estate development and rodevelopment schemes, including multi-storey dwellings, shopping contres, and all ancillary buildings.

The assistants appointed will work in small self-contained teams under the general direction of a Group Leader and the team will be responsible for the design, construction and management of projects.

The assistants appointed will work in small self-contained teams under the general direction of a Group Leader and the team will be responsible for the design, construction and management of projects.

The assistants appointed will work in small self-contained teams under the general direction of a Grou

The Guildhall, Nottingham

Nottingham.

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT
NEW AND EXPANDING TOWNS SECTION
Qualified ARCHITECT/PLANNER (up to
21,500) or ARCHITECT/PLANNER (up to
21,500) or ARCHITECT with Planning experience, possessing imagination, required for important planning and design work on expanding
towns in Hampshire and other counties. Varied
and interesting work. Selected applicant will
be required to tackle any aspect of town design
including work on the overall and detailed
planning and design of industrial areas.
Particulars and form, returnable by 17th
December, 1960, from Hubert Fennett. F.R.I.R.A.
Architect to Council (EK/A/3078/12), County Hall.
S.E.1.

CITY OF SALFORD
Applications are isovited from appropriately
qualified persons for the following posts in the
Department of the City Engineer & Surveyor,
G. Alexander McWilliam, B.Sc., A.M.I.C.E.,
A.R.I.C.S., M.I.Mun.E.
(a) PRINCIPAL ASSISTANT ARCHITECT,
J.N.C. Scale "A" (£1,410-£1,565 per
annum).

J.N.C. Scale "A" (£1,410-£1,565 per annum).

(b) TWO ASSISTANT ARCHITECTS, A.P.T. Grade V (£1,310-£1,480 per annum).

(c) PRINCIPAL ASSISTANT QUANTITY SURVEYOR, J.N.C. Scale "A" (£1,410-£1,565 per annum).

(d) ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade IV.V (£1,140-£1,480 per annum).

annum).

The posts will form the nucleus of a team which will be responsible for extensive schemes of housing and central redevelopment, including multi-storey flats and sew shopning precincts.

The commencing salary will be deenedent upon qualifications and experience. Housing accommodation may be provided in approved

accommodation may be provided in approved cases.

The posts are subject to the provisions of the Local Government Superannuation Acts. the Conditions of Service of the Joint Negotiating Committee for Chief Officers or the National Scheme of Conditions of Service, the Standing Orders of the City Council and the passing of a medical examination.

Posts (a) and (c) are terminable by two calendar months' notice and Posts (b) and (d) are terminable by one calendar months' notice. A five-day week is in operation.

Applications indicating the post applied for and stating age, education, qualifications and details of experience, together with the names and addresses of two referees, should be sent to the City Engineer & Surveyor, Town Hall, Saiford, 3, Lancs., to arrive not later than Wednesday, 28th December, 1960.

R. RIBBLESDALD THORNTON.

R. RIBBLESDALD THORNTON.

ABCHITECTS FOR CORBY NEW TOWN For young, keen Architects, a few vacancies exist in the Chief Architect's Department which will offer unique experience of absorbing work in a rapidly developing New Town.

Commencing salaries are as high as £1,140 per annum.

n. appointments carry generous increments emoluments; work will be available for ahead and there are excellent prospects of tion.

years ahead and there are excellent prospects of promotion.

Good housing is available in pleasant surroundings, removal expenses are paid, and there is a superannuation scheme under Local Government conditions.

Write at once for an interview, stating age, present appointment and salary, details of qualifications and experience, and the names of two referees.

referees.

R. F. BROOKS GRUNDY
Corby Development Corporation.
Spencer House,
Corby, Northants.

Spencer House,
Corby, Northants.

COUNTY BOROUGH OF ST. HELENS
BOROUGH ENGINEER & SURVEYOR'S
DEPARTMENT
Applications are invited for the following appointments in the Architectural Section:—
(a) CHIEF ASSISTANT ARCHITECT—Scale A (£1,385/£1,565).
(b) PRINCIPAL ASSISTANT ARCHITECT—A.P.T. Grade V (£1,510/£1,480).
Applicants for appointment (a) should be corporate members of the R.I.B.A. with experience in design and construction of public buildings, redevelopment schemes, large scale housing development and supervision of staff and will be responsible for supervision of staff under the control of the Chief Architect.
Applicants for appointment (b) should be suitably qualified with experience in general Municipal Development.
The Council operate a five-day working week. The appointments will be subject to N.J.C. Conditions of Service, the Local Government Superannuation Acts, a medical examination, and will be terminable by one month's notice.
Applications clearly indicating the post applied for, and setting out age, qualifications and experience and maning two referces, should reach the undersigned not later than Tuesday, December 13th, 1960.
Applicants must reveal relationship to any member or Senior Officer of the Council.

13th, 1960.
Applicants must reveal relationship to any member or Senior Officer of the Council.
Canvassing will disqualify.
M.I.Mun.E., M.T.P.I., A.M.I.Struct.E.,
Berough Engineer & Surveyor.

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT, Grade I, A.P. & T. (646-648). Housing accommodation available. National Scheme of Conditions of Service. Application forms from. and to be returned to, the City Engineer by 23rd December, 1960.

C. PETER CLARKE. Town Clerk

Town Hall, Peterborough.

BOROUGH OF FLINT
APPOINTMENT OF ARCHITECTURAL

APPOINTMENT OF ARCHITECTURAL

Applications are invited for the appointment of Architectural Assistant in the Boronch Engineer and Surveyor's Office. The salary will be within A.P.T. Grade II (2815-2850).

The appointment will be subject to the provision of the Local Government Superannuation Acts, the passing of a medical examination, the National Joint Council's Scheme of Conditions of Service, and one month's notice.

The post offers scope for interesting work on a varied programme including Redevelopment Schemes, Branch Library, Public Conveniences and Municipal Housing.

Housing accommodation will be provided if required.

A five-day week is in operation.

Applications, stating age, training, qualifications, details of previous and present appointments and experience and present salary, together with copies of two recent testimonials, should reach the undersigned not later than 2 p.m. on Monday, 12th December, 1960.

Canvassing in any form will disqualify.

WILLIAM McINTYRE.

Town Hall.

Town Hall, Flint, 23rd November, 1960.

23rd November, 1960.

HAMRLEDON RURAL DISTRICT COUNCIL ARCHITECTURAL ASSISTANT, A.P.T. III Applications are invited for the above-mentioned post (on Grade A.P.T. III plus travelling allowance) from suitably qualified persons. The Council would consider assisting with housing if necessary.

Applications, stating age, qualifications and experience, with names of two referees, should reach the undersigned not later than 17th December, 1960.

Dated this 28th day of November, 1960.

ROBIN J. GARLAND.

Clerk of the Council.

Council Offices, Bury Fields, Guildford.

NORTH RIDING OF YORKSHIRE COUNTY COUNCIL

Applications are invited for the appointment of ASSISTANT COUNTY AECHITEUT, Salary Scale C/D, from candidates of initiative with a flair for design and wide practical experience and also preserving to live in the country rather than exist in urban surroundings.

Conditions of service and application form from R. Allport Williams, M.B.E., B.Arch., F.K.I.B.A., County Hall, Northallerton, and applications to R. A. Wotherspoon, Clerk of the County Council, at the same address, before 20th December.

applications to R. A. Wotherspoon, Clerk of the County Council, at the same address, before 20th December. 4650

CITY AND COUNTY OF BRISTOL
CITY ARCHITECT'S DEPARTMENT
Applications are invited from persons with appropriate professional qualifications for the following permanent posts:—
ACHITECTS:

(a) DEPUTY CHIEF ASSISTANT ARCHITECTS, Scale A (£1,360—£1,565).

(b) SENIOR ASSISTANT ARCHITECTS, Scale A (£1,360—£1,565).

(c) SENIOR ASSISTANT ARCHITECTS, Grade A.P.T. (£1,300—£1,480).

(d) ASSISTANT ARCHITECTS, Grade A.P.T. II (£960—£1,310) and Grade A.P.T. II (£960—£1,310) and Grade A.P.T. II (£960—£1,310).

(e) ARCHITECTURAL ASSISTANTS, Grade A.P.T. II (£965—4960).

(f) JUNIOR ASSISTANTS, Greneral Division (starting salary at 18 not less than £220 per annum on scale rising to £950 per annum for applicants with University School Certificate or good G.C.E.).

Applicants for the Senior Architectural posts must hold appropriate qualifications and have had wide experience in Housing, Education or other types of large public building work. They will be required to design and work on projects to completion. Applicants will be considered on their capability for design, experience, contemporary outlook and suitability.

The department has an interesting and varied programme of work including the design and construction of Colleges of Art, Technology and Further Education; Secondary Schools, Markets, Baths. Libraries, and redevelopment projects including blocks of dwellings up to 15 storeys, Facilities will be available for design and construction of Colleges of Art, Technology and Further Education; Secondary Schools, Markets, Baths. Libraries, and redevelopment projects including blocks of dwellings up to 15 storeys, Facilities will be available for design and construction of Colleges of Art, Technology and Further Education; Secondary Schools, Markets, Baths. Libraries, and redevelopment projects including blocks of dwellings up to 15 storeys, Facilities will be available for design and construction of Colleges of Art,

(1) SENIOR QUANTITY SURVEYOR, Grade A.P.T. III or IV (2696-£1,140 or £1,140-£1,310),

(1) QUANTITY SURVEYOR'S ASSISTANT. Grade A.P.T. I (£645-£815).

Applicants for (h) and (i) should preferably be A.B.I.C.S. and in the case of (h) should be capable of taking charge of this section of the department in the absence of the Chief Quantity Surveyor. Applicants for (j) should preferably be of R.I.C.S. Intermediate standard. Housing accommodation will be provided, if necessary, at an economic rent. Assistance with removal expenses for all posts except (a), (b) and (h).

The Department works a five-day week. Details and application forms, returnable by Monday, 2nd January, 1961, from City Architect, Council House, Bristol, 1, 30th November, 1960.

CITY OF STOKE-ON-TRENT CITY ARCHITECT'S DEPARTMENT (a) ASSISTANT ARCHITECT'S, Grade A.P.T. IV (£1,140-£1,310).

(b) ASSISTANT ARCHITECT'S, Grade A.P.T. I (£645-£815).

Commencing salaries according to qualification and experience.

Applications to J. R. Piggott, T.D., P.R.I.B.A., City Architect, Kingsway, Stoke-on-Trent, by 25rd December, 1960.

HARRY TAYLOR.

HARRY TAYLOR.
Town Clerk

AYCLIFFE DEVELOPMENT CORPORATION
(New Town of Newton Accipre)
SENIOR ASSISTANT ARCHITECT
Applications are invited for an appointment of
Senior Assistant Architect at a salary in
accordance with Grades A.P.T. IV or V of the
Whitley Council for New Towns Staff Scales of
Salaries, i.e. £1,140-£1,310 p.a. or £1,310-£1,480
p.a. The commencing salary and grade will be
fixed according to the qualifications and experience of the successful applicant,
Applicants should be associates of the Royal
Institute of British Architects. The principal
work for the successful applicant will be in
connection with the development of the town
centre of the new bown.
Appointment subject to N.J.C. Conditions.
superannuation, medical examination and to one
month's notice, in writing, on either side.
Housing accommodation available if required.
Applications, stating age, qual'fications, experience and present salary, together with the
names of two referees, to arrive by Wednesday,
28th December, 1960.

A. V. WILLIAMS,
General Manager.

A. V. WILLIAMS, General Manager Churchill House.
Newton Aycliffe.
Nr. Darlington.

CITY OF PORTSMOUTH

CITY ARCHITECT'S DEPARTMENT
Applications are invited for the appointment
of ASSISTANT ARCHITECTS. A.P.T. Grade IV
(£1,140-£1,310), commencing salary according to
experience. Present work of Department includes
new Civic Offices. Technical College, Schools,
Swimming Baths, Multi-storey Flats, Old
People's Homes, etc.
Applicants must be Associate members of the
R.I.B.A.
The Council will consider the provision of
housing accommodation at an economic rent in
suitable cases.
Applications, giving full details of experience
and the names and addresses of two referees, to
the City Architect, I. Western Parade. Portsmonth, not later than Thursday, 22nd December,
1960.
Canvassing will disqualify.

mouth, not later than Thursday, 22nd December, 1960.

Canvassing will disqualify.

CORNWALL COUNTY COUNCIL
COUNTY PLANNING DEPARTMENT
ASSISTANT PLANNING DEPARTMENT
ASSISTANT PLANNING OFFICER (ARCHITECT) WITHIN GRADE A.P.T. IV
Applications are invited from Associate
Members of the R.I.B.A. (with preference to
Chartered Town Planners) for this post which
covers a variety of work including Schemes of
Urban Renewal.

No application forms are being issued but
further details can be obtained from the County
Planning Officer.
The customary Conditions of Service will apply
and car allowance will be paid. A five-day week
is in operation.

Applications, with names of three referees,
should be sent to H. W. J. Heck, PP.T.P.L.
County Hall, Truro, not later than 24th December, 1900.

E. T. VERGER.

DEPARTMENT OF ARCHITECTURE AND PLANNING OFFICER (OUTER AREAS)
Appointment may be made within the Grade according to qualification/experience.
The post offers wide experience for recently trained architectural design enthusiast on 3-dimensional advisory schemes.
Permanent and pen-donable subject to satisfactory medical certificate. Housing accommodation in approved cases. Removal expenses loan.

dation in approved cases. Removal expenses loan.

Application forms and details from City Architect and Planning Officer. Council House. Coventry. returnable 14 days of publication. 4731

COUNTY BOROUGH OF NORTHAMPTON (a) SRNIOR ASSISTANT ARCHITECT (HOUSING). A.P.T. V (£1.30-£1.480).

(b) SENIOR ASSISTANT ARCHITECT, A.P.T. IV/V (£1.40-£1.480). A.P.T. Topolications invited for these appointments in Northampton which has an interesting programme of new schools. Municipal buildings and multi-story flats in redevelopment schemes. Commencing salaries will depend upon ability and experience.

Full particulars and application forms. returnable by 20th December, from Borough Architect. Guildhall, Northampton.

C. E. VIVIAN ROWE.

Town Clerk.

4732

required by LONDON TRANSPORT for the

required by LONDON TRANSPORT for the following nosts:

ASSISTANT ARCHITECTS: Salary range £1,140 p.a.—£1,320 p.a. Applicants must be fully qualified and capable of suncryising staff. (Reference 117/A/1.)

ARCHITECTURAL ASSISTANTS: Salary ranges £1,050 p.a.—£1,040 p.a.

£940 p.a.—£1,020 p.a.

Applicants should be qualified to R.I.B.A. Intermediate standard with previous office experience. (Reference 117/B/1.)

Free travel: five-day week: medical examination: contributory suncrannuation after probation. Applications and full defails of experience. Assistance age, qualifications and full defails of experience. Salaff and Welfare Officer, London Transport, 55. Broadway, S.W.1.4688

BOROUGH OF NEWCASTLE INDER LYME PRINCIPAL ASSISTANT ARCHITECT GRADE A.P.T. V (21,310-c1.480 n.a.) Applications are invited for the above post from Associate Members of the R.I.B.A.

The successful candidate will control the Education Section of the Architects Department, comprising three qualified assistants and two inviers.

comprising three qualified assistants and two juviors.

Preference will be given to anolicants who have had considerable experience in the design of new schools and who have acted previously as groun leaders.

Commencing salary will be in accordance with canability and experience. A car allowance will be made on the casual users scale and the provision of housing accommodation will be considered in suitable cases.

Anolication forms and conditions of appointment may be obtained from the Borough Surveyor. Lancaster Building, Newcastle Staffe, and should be returned to him not later than Monday, 19th December, 1960.

C. J. MORTON.

C. J. MORTON

LONDON COUNTY COUNCIL ARCHITECT'S DEPARTMENT

Vacancies for:—
(1) PRINCIPAL ASSISTANT (Professional).
Salary scale £1,700—£1,950.
(2) ARCHITECTS, Grade 1. Salary scale £1,500—

£1,700. Architects appointed would have charge of a ction engaged on new building work in the chools, Housing General, or Special Work

Schools, Housing General, or Special work Divisions.

The Principal Assistant (Professional) might also be required to take some specialist divisional responsibility.

Full programme of interesting work.
Particulars and application form, returnable by 30th December, 1960, from Hubert Bennett, F.B.I.B.A. (EK/A/3114/12), Architect to the Council. County Hall, S.E.I.

BOROUGH ARCHITECT'S DEPARTMENT Applications are invited for the post of ARCHITECTURAL ASSISTANT in the Architect's Department, where there is a variety of interesting work. Preference will be given to an Associate B.I.B.A. who should have good housing experience.

Associate R.I.B.A. who should have good nousing experience. N.J.C. Conditions. Post pensionable. Medical examination. Casual user car allowance. Hopsing available in due course. Assistance with removal expenses. Five-day week. Details giving qualifications, age, training, experience, etc., and names and addresses of two referees to be sent to the Borough Architect, Eric Almond, Dipl. Arch., A.R.I.B.A., Municipal Buildines, Basingstoke, Hants., by 30th December, 1960.

L. WOMERSLEY.

L. WOMERSLEY.

COUNTY COUNCIL OF THE WEST RIDING OF YORKSWIRE OFFICE OF THE COUNTY ARCHITECT Applications are invited for the following

OFFICE OF THE COUNTY ARCHITECT Applications are invited for the following appointments:—
CHIEF ASSISTANT COUNTY ARCHITECT.
Salary Scale 22.015—22.345.
The successful applicant, who must be an Associate Member of the Royal Institute of British Architects and possess sound experience in contemporary design and construction, will be required to programme and construction, will be required to programme and sard sections within the Department on a varied and large scale building programme and in general to take charge of technical administrative work and l'aison with Private Architects. Experience in Council and Committee procedures essential.
ASSISTANT COUNTY ARCHITECT, Salary Scale 21.710—21.975.
Applicants, who must be Associate Members of the Royal Institute of British Architects, should possess sound experience in contemnorary design and construction and be capable of supervising a large section of the office engaged on major building projects.
Anofications to be submitted by the 29th December, 1960, on forms to be obtained from and returned to the undersioned.

Bishopgrath.

Westfield Royal.

Bishongarth. Westfield Road. Wakefield.

Wesfield Road.
Wakefield.

Wakefield.

4740

STA PFORDARTIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT

VACANCIES

ASSISTANT ARCHITECTS. Balary ranges
£1,310-£1,400

ASSISTANT ARCHITECTS. Salary ranges
£1,140-£1,310: £960-£1,140. Prospect of progression between Grades subject to satisfactory service and Committee approval.

ARCHITECTURAL ASSISTANTS. Salary range
£315-£960. Good prospects of promotion on
Dassing R.I.B.A. "Final"

The County Architect is looking for imaginative and enthusiastic Assistants, who are seeking an opportunity to display their talents on a
wide variety of interesting schemes.
Good working conditions, assistance with
removal expenses, boans for housing, etc.
Forms of application from P. Woodcock,
Forms of application from P. Woodcock,
Forms of application from P. Woodcock,
Closing date 21st December, 1960.

Clerk of the County Council.

4737

HERTFORDSHIRE COUNTY COUNCIL.

HERTFORDSHIRE COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT GROUP ARCHITECT'S DEPARTMENT GROUP ARCHITECT (J.N.C. "D"—£1.710 to £1.975 per annum) required.
Annificants should possess enthusiasm, good design ability and a comprehensive knowledge of modern building techniques, particularly in the field of education.

"A car user allowance will be payable. Further particulars and form of annification to be obtained from Geoffrey Fardell M.B.E., A.R.I.R.A. County Architect, County Hall, Hertford, Herts., to whom they should be returned not later than Monday, 19th December, 1960.

ARCHITECTURAL ASSISTANT: Candidates should either he studying for or have neared Intermediate R.I.R.A. nossess a smad knowledge of huilding construction and ability to menare detailed and hin scale drawines. Salary scale no to £1.095. Anolications within seven days to The City Surveyor, Guildhall, E.C.2.

ARCHITECT, Grade III, for design and construction of buildings in parks and open spaces. Excellent opportunity for experience of collaboration with landscape architects. Up to \$1,250 according to qualifications and experience. Apply Chief Officer (Al./3/3305/12), L.C.C. Parks Department, County Hall, S.E.I. (Phone WATerloo 5000 Ext. 8076.)

Architectural Appointments Vacant per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

RONALD WARD AND PARTNERS invite applications from ARCHITECTS, Senier and Junior. Long-term prospects. Scope for initiative and responsibility in inferesting commercial, industrial and civic projects in British Islaes, West Africa and Australia. Salaries commensurate with ability. Non-contributory Fensica and Life Insurance schemes. Five-day week. Pleasant offices. Apply 29, Chesham Piace, Relegrave Square, London, S.W.I. Tel.: BELgravia 3361.

A BCHITECTURAL ASSISTANT required in busy City Office. Assistants should be capable of carrying through schemes from sketch stage to final construction. Mainly office and residential buildings in London area. Varied and interesting projects. Long term engagement to right person. £1,600 per annum plus lancheoa vouchers. Five-day week. Applicants must be capable of producing sketch schemes on contemporary buildings, and preparing working drawings. Box 4228.

DASIL SPENCE & PARTNERS require quali-fied and experienced ARCHITECTS to fill positions of responsibility on a major building programme. Write 50 48, Queen Anne Street. W.l. stating experience and salary required.

WEST END OFFICE requires ASSISTANT ARCHITECTS of Final and Intermediate standards for interesting Industrial projects in Home Counties. Good saisries offered to men with initiative and ability. Bonus Scheme, fiveday week, holiday arrangements homoured. Box

LIE MAYORCAS requires ARCHITEC-trural ASSISTANTS with a minimum of three year's office experience in this country. Write, giving brief particulars of architectural education and experience, and salary required, to E. David Mews, Baker Street, W.I. 2233

\$21.000 \(^{\text{L2}}\_{\text{2,000}}\) p.a. will be paid to experienced competent ABCHITECTS by a private practice in the City of London. The work will be primarily on the drawing board on new and interesting projects of magnitude. A high standard of design and detailing ability is required. Please apply in writing to Box 9360.

A RCHITECTURAL ASSISTANT required for City Office Qualifications unnecessary, but experience in the preparation of working drawings essential. Salary £1,000 per anoum plus luncheon vouchers. Five-day week. Box 4229.

MONRO AND PARTNERS require ARCHI-TECTURAL ASSISTANTS of Intermediate: Final R.I.B.A. standard in their London, Watford, and Glasgow Offices for work on interesting indes-trial and commercial projects. Salary range 2800 -2,000 p.s. Non-contributory Pension Scheme. Five-day week. Apply in writing to 32, Claren-don Road, Watford.

SIE JOHN BURNET, TAIT & PARTNERS have vacancies for ARCHITECTURAL ASSISTANTS of all grades. Selarles ranging from £1,000 to £1,500 per annum. Luncheos vouchers. Pension and Medical schemes (non-contributory). Telephone LANgham 382£ for appointment.

A RCHITECTURAL with at local A RCHITECTURAL ASSISTANT required, with at least two years' office experience. Apply in writing to Thomas Mitchell & Partners, 20, Bedford Square, London, W.C.I.

PRYAN & NORMAN WESTWOOD & PART. NERS require Senior and Junior ASSIB-TANT ARCHITECTS. Please apply to 21, Suffik Street, London, S.W.1. Trafalgar 441, 4108

BIRDS EYE FOODS LIMITED

BIRDS BYE FOODS LIMITED
is seeking
ARCHITECTURAL ASSISTANTS
to assist the Company Architect in carrying out
full architectural services for this rapidly expanding company, and, in particular, to advise
the Factory Chief Engineers on all matters concerned with architectural design, selection of
materials and foishes.
Successful applicants will be in the 25-30 age
group, of at least Intermediate R.I.B.A. standdard, and will show themselves canable of handling building projects from sketch design to
completion.
A starting salary of not less the

npiction.

I starting salary of not less than £1.600 is visaged, with opportunities for progress, and l employee benefits include comprehensive prion scheme. Applications should be sent in

to:
Personnel Officer.
Birds Eye Foods Ltd.,
Hesketh House, Portman Square,

SENIOR ASSISTANTS required immediately.
Salary by arrangement. Theo. H. Birks, 3c,
Portland Flace, London, W.1. LAN 7236. 1486 ASSISTANT ARCHITECTS required for starting a new office opening in Southampton for work on interesting projects including University, War Department and Ecclesiastical programmes. Juniors also required. Apply stating age, qualifications, experience and salary required to Robert Potter, F.R.I.B.A., & Richard Hare, B.Arch., A.R.I.B.A., De Vaux House, Salisbury.

ARCHITECTURAL ASSISTANTS of Final and Intermediate standard for interesting work in expanding office. Applicants should be experienced in design and construction and taking responsibility. Excellent opportunity of advancement, salary range from £750 to £1,400 per annum according to experience. Five-day week. Apply to 77, Wigmore Street, London, W.I. WELbeck £274/5.

HOWARD V. LOBB & PARTNERS require
ASSISTANT ABCHITECTS. Salaries would
be between £750 and £1,250 per year. Please write
to 20 Gower Street, London. W.C.l. 3640

BOOTH, LEDEBOER AND PINCKHEARD
require ASSISTANTS in the salary range
£750-£1,250. Apply 17-20. Mason's Yard, Duke
Street, St. James's, S.W.I. Tel.: TRAIsigar
1864.

INTERMEDIATE to Final ASSISTANTS required immediately. Salary according to ability and experience. Theo. H. Birks, 34, Portland Place, London, W. L. LAN. 7236. 9739

RICHARD SHEPPARD, ROBSON & PART-NERS require ASSISTANTS of Intermediate and Final standard; salary range 2750—21,000 according to ability. 5 Southampton Place, W.C.1. CHAncery 4261.

WALLIS GILBERT and PARTNERS ALSO NEED STAFF URGENTLY. 5, Cromwell Road, S.W.7. KENsington 1450. 3814

A VACANCY occurs in the West End Branch of large provinctal Architectural Practice, for an ASSISTANT at Intermediate standard. The post offers considerable scope in varied projects. Five-day week, Luncheon Vouchors, Write giving particulars of age, experience and salary required to Box 435.

SENIOR ASSISTANT ARCHITECTS required immediately for a wide variety of interesting work. Auplicants should be experienced in all aspects of modern building design and construction. Attractive remuneration to right men capable of working on own initiative under ideal conditions for self expression. Preference given to men over 45 vears of age although all applications will be considered on merit irrespective of age. Applications should be made, in writing, to Keneth F. Masson, Esc., A.R.I.B.A., Chief Architect. S.C.W.S., Ltd., Architectural Division, 76 Morrison Street, Glascow, C.S.

S.C.W.S. Ltd., Architectural Division, 76 Morrison Street, Glasenew, C.S. 4152

L'APERIENCED ARCHITECTURAL ASSISGENERAL TANT required for busy West End office. General projects. Bernard Gold & Partners, 4/6. Savile Row, W.L. REGent 7551.

A QUALIFIED ARCHITECTURAL ASSISTANT required immediately in Home Counties office. Successful applicant will have the opportunity of working on widely varying industrial, commercial and housing schemes. Five-day week, Write full narticulars to Rox 4136.

C. H. ELSOM & PARTNERS need experienced ARCHITECTS for a wide range of public and commercial projects. VICtoria 4394. 10. Lower Grosvenor Place. W.I.

PRIGHTON & HOVE. Experienced ASSISTANTS in all grades required. Details please to: H. Hubbard Ford & Associates, 67. Church Road, Hove, 3, Sussex.

A RCHITECTS AND PLANNERS required.

Large City Development Area, University work, Schools, etc. D. Harvey & A. Scott, 2. Lynedoch Place, Glasgow, C.3. Tel. No.; Douglas 8388.

SOUTHAMPTON. Senior and Junior ARCHI-TECTURAL ASSISTANTS required for interesting contracts in the Southern Counties. Apply with details of experience and salary re-quired to M. M. Galloway & Parthers, F./ A.R.I.B.A., 10 Portland Street, Southampton. 3656

A SSISTANT with several years' office experi-drawings from sketches, required immediately by West End Architects. Should be interested in supervising the work and have a sound knowledge of construction. Write for interview to Box 3557.

TWO first class ARCHITECTURAL ASSIS-TANTS required. Salary range £1,250— £1,750 p.a. depending upon experience. Write with fullest details of experience. Box 4227.

PARTIES STANDOR HULLIAM HALCROW AND AND AND AND AND ARCHITEST AND ARCHITECTURAL ASSISTIVE PART AND ARCHITECTURAL AND ARCHITECTURAL AND ARCHITECTURAL AND ARCHITECTURAL AND ARCHITECTURAL AR

WELCH AND LANDER require ASSIS
TANTS. Intermediate to Final standard,
preferably with office experience. 38 Gloucester
Place, W.1. Tol. WELbeck 6551.
4376

Place. W.1. Tol. WELbeck 6551.

ASSISTANT required to carry out medium size projects under supervision but with scope for initiative. Preferably used to commercial or school work. Excellent prospects. Box 4375.

COOK, CULLING & ILLINGWORTH require experienced ASSISTANT ARCHITECT for busy Industrial practice. Pleasant conditions. House available. Apply: Meeting Lane, Gold Street, Kettering.

ASSISTANTS. ASSISTANTS. ASSISTANTS.

A SSISTANTS, ASSISTANTS, ASSISTANTS.
A Share in the Profits (if any).
Salaries £500—£1.200 p.a.
Stanley R. Nevoll & Partners. Abbey 3971. 4336

A Share in the Tourist Salaries (500-61.200 p.a. Stanlev R. Nevell & Partners. Abbey 3971. 4336

A SSISTANT ARCHITECTS with some experience required by Kenneth Lindy & Partners. Offices in City and at Loughton, Essex. Good salaries, varied practice. Every opportunity for initiative and responsibility. Write to 28 St. Mary Axe, or telephone Avenue 4430 or Loughton 4161.

ARCHITECTURAL ASSISTANTS required tial, industrial and commercial work in busy private office. E. Austen Johnson, Esq. Cloth Hall Street, Huddersfield.

ARCHITECTS, ASSISTANT ARCHITECTS, DRAUGHTSMEN required in expanding contemporary office. Experience and ability well rewarded. Pension scheme in operation. Assistance with housing and removal considered. Shepherd, Fowler & Marchall, L./A.E.I.B.A., 15 St. James' Row, Sheffield, 1, 28854.

BUSY private practice has vacancy for ARCHI-TECTURAL ASSISTANT, preferably car driver. Pleasant office and working conditions. Five-day week. Scope for initiative and responsi-bility on veried and interesting works including Domestic, Commercial, Industrial and Ecclesiasti-cal, over wide area of the country. Commencing salary according to experience and ability up to 21,000. Please apply giving fullest details to A. R. Laing, Deacon & Laing, 65 Goldington Road, Bedford. 4324

A BCHITECTS. Experienced ASSISTANTS required for work on major schemes, able to take initiative and responsibility. Bonus, Pension and Life Assurance Schemes. Salary according to experience and ability. Full particulars to Hadfield Cawkwell & Davidson, 17 Broomgrove Boad, Shemeld. 19.

A RCHITECTURAL ASSISTANT required, with A good general experience for varied work mainly industrial and commercial. Write giving experience and selary required to Howell, Free-man & Batten, Chartered Architects, Reading.

OSCAR GARRY AND PARTNERS require one or two SENIOR ASSISTANTS to work on large projects at present at early design stage. Minimum five years' experience essential. Salaries not less than £1,100. Luncheon Vouchers. Apply 66 Gloucester Place, London, W.1, or phone WELbeck 2509.

TRIPE & WAKEHAM, Chartered Architects, require ASSISTANTS in all grades to work in their London office on interesting projects both in this country and abroad. Salary by arrangement. Telephone WELbeck 7744 or write to 16, Fitzhardinge Street, London, W.l. for an appointment.

to 16. Fitzhardinge Street, London, W.1. for an appointment.

GOOD ALLROUNDER required with a minimum of four years' experience to personally assist a Partner in charge of a team and also to run jobs on own initiative. To start immediately in the New Year. Apply, staling age and general experience, to J. M. Austin-Smith and Partners, 29, Sackville Street, London, W.1. 4546

ES50-E1,550

WILL be paid. commensurate with ability and experience to ARCHITECTS and ARCHITECTURAL ASSISTANTS by a Birmingham firm of Architects, who require men of experience and initiative to work on interesting large scale projects providing scope for advancement. Five-day week. Canteen facilities and Pension Scheme. Box 4591.

SENIOR and JUNIOR ASSISTANTS required work.

Green Lloyd & Son.

work.

Green. Lloyd & Son.
5. Pickering Place.
St. James's Street. S.W.1.
Telephone WHItehall 8926.

HIGH FELL GREEN SLATE for cladding HIGH FELL GREEN SLATE for cills and surrounds HIGH FELL GREEN SLATE for copings HIGH FELL GREEN SLATE for walling HIGH FELL GREEN SLATE for fireplaces HIGH FELL GREEN SLATE for quality colour

texture

craftsmanship send now for full technical literature

Limestone & Green Slate Slab Co. (Westmorland) Ltd. Appleby Road, Kendal

telephone: Kendol 1246

TUMBERLAND Architects require an ARCHI-TECT and an experienced ARCHITEC-1URAL ASSISTANT. Salary by arrangement, according to experience and qualification. Apply to Johnston & Wright, 13 Castle Street, Carlisle.

QUALIFIED ARCHITECTS looking for some really interesting new work should apply to George, Trew and Dunn at their new offices, 50, Eastbourne Terrace, W.2.

A RCHITECTURAL ASSISTANTS who are looking for some really interesting work where wide experience can be gained, should apply to George, Trew and Dunn at their new offices, 50, Eastbourne Terrace, W.2.

IR Hugh Casson, Neville Conder and partners require intermediate or newly qualified ASSISTANTS. Please write 35 Thurlos Place, S.W.7.

ASSISTANTS. Please write 35 Thurlos Place, SW.7.

4600

RRIC COLE & PARTNERS, F.P.B.I.B.A., have vacancies for all grades of Staff at their Cirencester and Swindon Offices. Salaries by arrangement. 5-day week.

ENIOR ARCHITECT required immediately to the stake charge of section dealing with Hospital work. Commencing salary 22,000—22,500 per annum dependent on qualifications and experience. Write, giving full particulars, to Box 4620.

VORTH & PARTNERS, Chartered Architects, Maideuhead, require experienced ARCHITECTURAL ASSISTANTS required, Agenty and Junior, for busy Country Practice. Varied work in congenial surroundings, Salary by arrangement. Pemberton & Bateman, vine Street, Evesham, Worcs.

ARCHITECTURAL ASSISTANTS, qualified, ACM RCHITECTURAL ASSISTANTS, qualified,

Vine Street, Evesham, Worcs.

ARCHITECTURAL ASSISTANTS, qualified, required. Salary £800-£1,350 per annum according to experience, Glasgow Office. Fiveday week, Schools, Offices, Redevelopment, etc. State experience. D. Harvey & A. Scott, 2. Lynedoch Place, Glasgow, C.S. Tel. No. Douglas 8388.

A RDIN & BROOKES & PARTNERS require
A ASSISTANTS, salary range £500-21.200
per annum. Busy office with progressive design
policy. Spacious offices near Polytechnic. Regent
Street. Phone LANgham 5227.
4583

A prince Languam 522. 4533

A building and civil engineering organisation requires the services of an ARCHITECT

A PPLICANTS should be experienced in the design and execution of working drawings in connection with Industrial. Commercial, Housing and Flat Development schemes. Permanent and progressive position. Salary £1,500 plus bonus. Box 4579.

JUNIOR ARCHITECTURAL ASSISTANT up to Intermediate standard required in Wat-ford. Pleasant office. Five-day week. Details of age, experience and salary required to Box 4578.

of age, experience and salary required to Box 4578,

ASSISTANT required immediately by Surrey commercial company. Intermediate/Final standard Experience in conversions and interior design preferred. Salary £300—£1,100. Housing assistance if required. Box 4537.

EXPERIENCED ARCHITECTS AND ARCHITECTURAL ASSISTANTS of all grades urgently required for the Architects' Department of a firm of Consultants for their offices in Southern England. Good salaries commensurate with experience and qualifications. Please apply in writing, giving details of experience, training and other relevant details to Box 4558.

ARCHITECTURAL ASSISTANT. qualified, pref. single, approximately 25 years old, required by Canadian architects in NEW-FOUNDLAND. Commencing salary £450,00 per month, passage paid, two-year contract. At least two years practical experience essential. Apply immediately with full details to Overseas Technical Service, 4, Lion Street, Kidderminster, quoting 13171.

VOUNG ARCHITECT WITH EXPANDING
PRACTICE IN THE SOUTH MAN.
CHESTER DISTRICT. REQUIRES AN ASSISTANT. INTERMEDIATE R.I.B.A. STANDARD
AND WITH OFFICE EXPERIENCE. PLEASE
STATE SALARY REQUIRED. BOX 4588.
TEATHER & HADFIELD, Chartered Architects. Mazda Buildings. Campo Lane,
Sheffield, I. invite applications for the following:
ASSISTANT ARCHITECTS capable of taking
charge of contracts from sketch design to completion.

ARCHITECTURAL ASSISTANT, up to Inter-

ABCHITECTURAL ASSISTANT, up to Intermediate standard.

Dentations to be made by letter.

A587

DENTS LASDUN & PARTNERS require qualified and experienced ARCHITECTS to fill positions of responsibility. Salaries from £1.100 p.a. according to ability and experience. Write to 3. Albany Terrace. N.W.I. or telephone HUNter 1822 for an appointment.

SENIOR and JUNIOR ASSISTANTS and DRAUGHTSMEN required by Multiple Shop Company's Architects Department. Fiveday week, excellent salaries, staff canteen, etc. Work consists of defail working drawings both a in. and 3 in. locether with travelling throughout the country. Please reply, stating age, salary required sod past experience to Box 4534.

A SSISTANT approaching Finals required busy Country Practice, 45 miles London. Office experience and ability to take responsibility essential. Salary not difficult to agree. Box 4570

£1,000-£1.500. ASSISTANT required in the Dundee and Edinburgh offices of Robert Matthew and Johnson-Marshall for work on major hospital projects. Apply to 31, Regent Tegrace, Edinburgh, 7.

A RCHITECTURAL ASSISTANT about Inter-Standard required for busy office dealing with wide variety of Commercial, Industrial and Domestic Work. Ability to do perspectives an advantage. Apply: Bostock & Partners, SOUthall 3491.

BIRMINGHAM.—We need a young ARCHITECT, either qualified or in training, with a good sense for clean and straight forward design. There is plenty of scope for the right man. Top salary according to experience. Apply J. Affred Harper & Son. 63, Temple Row. Rimingeham.

Birmingham.

TWO responsible Intermediate ASSISTANTS required with contemporary outlook. South Manchester. Minimum salary £600. Box 4446.

£1,500 offered to very SENIOR ARCHIGOTCH & PARTNERS, working on a varied programme of large contracts here and abroad. Design and constructional experience both in the office and on site, as important as initiative and imagination. Pension Scheme, luncheon vouchers and five-day week. Applications in writing to £6. Regency Sonare, Brighton.

A RCHITECTURAL ASSISTANT, R.I.B.A.

A Intermediate or near Intermediate standard. Salary in accordance with experience and qualifications. F. Tomkinson & Son, Architects, 130. Edleston Road, Crewe.

4518

180. Edleston Road, Crewe.

ARCHITECTS

QUALIFIED Men or Women required, to run
Church, School, and industrial projects.
Starting salary £1,000 to £1,600 or more for
outstanding ability.

WEIGHTMAN & BULLEN, ARCHITECTS
76. Rodney Street, Liverpool, 1.
Five-day week, Bonus and Pension Scheme.
4515

EXPERIENCED No. 1 required in small but busy City Office. Interesting and varied work. Excellent prospects for suitable applicant. Write giving details of age and experience to Box 4448.

Box 4448.

COWES.—ASSISTANT ARCHITECT required
for work mainly on schools building programme. Salary by arrangement. Please write
to Howard V. Lobb & Partners, 16, Bath Road.
Cowes. I.W. 4532

Cowes. I.W.

COMPETITION WINNERS require Senior and
Junior ASSISTANTS to work on interesting modern public building. Write or phone:
Goodwin & Tatum. 6. Bedford Row. W.C.I.
CHA. 5811.

of Expanding Architects Department of established Building & Development Company requires

quires

ARCHITECTURAL ASSISTANTS
at new Headquarters Building in Ealing, for
work on Industrial and Commercial Projects.
Keenness and experience essential. Good salaries
paid. Five-day week. Lancheon vouchers. Pension scheme available. Please state age, experience and salary required to
Box 4697.

ARCHITECTURAL ASSISTANT required by

A RCHITECTURAL ASSISTANT required by Multiple Shoe Company for the design of building and shop fitting work. Must be capable of taking surveys, preparing drawings and prospective sketches for numerous interesting projects. Pension Scheme, salary according to experience. Applications giving full details to R. C. Lansdown, Property Department, Lilley & Skinner Ltd., King's Cross, London, N.1, marked Confidential.

Onedential.

OUIS DE SOISSONS, PEACOCK, HODGES, ROREDTSON & FRASER require competent ARCHITECTURAL ASSISTANTS in their Exeter office: good salaries will be offered to suitable applicants. Details of training, experience and age should be sent, with an indication of salary required, to 12 Baring Crescent, Exeter.

SENIOR AND JUNIOR ARCHITECTURAL
ASSISTANTS required for private practice
in Bristol. Varied work, five-day week. Salary
according to experience. Travelling expenses
paid to applicants selected for interview, Apply:
Burrouch & Hanam, F/F.R.I.B.A., 23 Richmond Hill, Bristol 8.

mond Hill. Bristol 8.

PIRMINGHAM.—Clifford Tee & Gale.

PIR I B.A., require experienced SENIOR.

ASSISTANTS and INTERMEDIATE STANDARD.

ASSISTANTS for interesting industrial and commercial work in a congenial atmosthere.

There are also vacancies for ASSISTANTS who are particularly interested in Service installations for these types of buildings.

Five-day week. Three weeks' holiday after analitying period. Profit-sharing scheme. Pension scheme.

Please annly to Mr. R. G. Cox, F.R.I.B.A. 43. Frederick Road, Birmingham, 15. Tel.: EDGhaston 3676.

A RCHITECTURAL ASSISTANT required of intermediate standard with or without previous experience, for interesting varied work Apply Victor Bloom & Parthers, 12 Gloucester Place, London, W.1. HUN 2069.

BOISSEVAIN & OSMOND require the followers and for their head office in Epsom to work on interesting major projects. Intermediate ASSISTANTS and qualified ABCHITECTS (all grades required). This is a growing practice with excellent working conditions providing an opportunity for men with initiative. Salary scales are generous and in accordance with ability and experience. Please write to Kingashade Walk. Epsom, Surrey.

A RCHITECTS with busy practice in Brighton require ASSISTANTS with practical ex-perience for varied work. Salary up to £750 per annum. Five-day week, pension scheme, etc. Box 5848.

J DOUGLASS MATHEWS & PARTNERS
have several vacancies for ARCHITECTURAL ASSISTANTS. Salary range £700 to
£1,000. Group system operated, giving opportunity for taking part in all aspects of work.
Graded salary system. Annual bonuses. Pension
Scheme. Luncheon vouchers. 3. Ebury Street,
London, S.W.L.

#### FULL JOB DESCRIPTION

and Conditions of Employment including salaries and prospects have been written for vacancies in the Architects Department of Richard Costain Limited.

The appointments to be made will appeal to young qualified ARCHITECTS or those near qualifying who are seeking responsible experience of fast moving commercial, industrial and multi-storey projects.

Candidates are invited to apply for a Job escription and application form in the first lace. Letters should include a brief outline of raining and career to date and should be ddressed to

Personnel Manager (B/1), 111 Westminster Bridge Road, London, S.E.1.

LOUGON, S.E.I. 4641

SIDNEY KAYE of Lewis Solomon, Kaye & Partners requires ARCHITECTS and ASSISTANTS—all grades—for important comprehensive redevelopment scheme in Central Loudon. The development will consist of shopping forum, multi-storey offices and flats, school and ancillary buildings. The development is to commence shortly and will take approximately four years to complete. Architects and Assistants employed on this project will be required to work as a team under the direction of a Partner. Good salaries and conditions offered to men with initiative and good practical design. Apply in writing to: Thavies Inn House, 5 Holborn Circus, E.C.I.

SIMON-CARVES LTD.

SIMON-CARVES LTD. have a vacancy for a

#### QUALIFIED ARCHITECT

in their Building & Civil Engineering Department. Candidates should have A.R.I.B.A., have a wide experience in industrial buildings and allied work, and be capable of directing the work of others.

The preferred age range is 30-40 and a starting salary of up to £1.500 p.a. will be paid according to the calibre of the successful applicant.

Send brief relevant details to Staff & Training Division, SIMON-CARVES LTD., Cheadle Heath.

Stockport, Cheshire, quoting Ref. SP.39. 4655

ARCHITECT of outstanding ability not over 35 required by rapidly expanding organisation with its head office in the only exposed steel framed building of its kind in the country. The position will appeal to a man who wants to become a key member of a small but highly outlified team of enthusiasts who are introducing new conceptions into the design and construction of commercial and industrial buildings, Applicants should write stating age, qualifications, experience and approximate salary required to Industrial Development Consultants. Industrial House. Stratford-upon-Avon. 4643.

FARMER AND DARK require ASSISTANT ARCHITECTS with some office experience. Initiative and ability. Varied work. Apply Romney House. Tutton Street. S.W.I. Tel.: ABBey 6311.

BullIN firm of Architects require experience of the preference of ARCHITECT for School and Flat

Romney House. Tufton Street. S.W.1. Tel.:
ABBey 6311.

DUBLIN firm of Architects require experienced ARCHITECT for School and Flat projects in Dublin and overseas. Keen design-sense and good draughtsmanship essential with good knowledge of construction and detailing. Salary £800—£1,000 p.a. according to office experience. Rox 4638.

WELL ESTABLISHED firm of London Architects require experienced qualified or unqualified staff for their new Eastbourne office age 20/35. Salary £600—£1,200, according to age and experience. Gunton & Gunton, Empire House, St. Martins le Grand, E.C.1. 4674.

ASISTANT required, Final standard. for varied practice in office of Barber, Bundy & Greenfield, F/A/A.R.I.B.A. Salary by arrangement. Reply to 5 Apple Market, Kingston-upon-Thames.

FULI.Y COMPREHENSIVE SERVICE offered including land and building surveys, sketches and working drawings. Anywhere, anytime. ENTerprise 4747.

JUNIOR ASSISTANT ARCHITECT required to help run growing practice in East Anglia. Experience in industrial work preferable. Starting salary 4900—£1,200 depending on experience. Box 4667.

EXPERIENCED INTERMEDIATE ASSISTANT to work on various projects, including Supermarkets, Office Buildings, Laboratories and Factories. Five-day week, bonus scheme. Phone Sloane 0633.

BNIOR ASSISTANT ARCHITECT to work on many interesting contemporary projects of a commercial and industrial character. Salary by arrangement. Bonus scheme. Phone Sloane

A RCHITECTS ASSISTANT with office experi-ence required for widely varied and inter-seting work. Perspective drawing ability desir-able. Apply A. Beaumont Owles, A.R.I.B.A., Wells & Walchli, 6-8 Sackville Street, W.1. 4597

GOUGH COOPER & COMPANY LIMITED

with experience in the whole field of domestic design. Excellent opportunity for a qualified man ready to take a position of responsibility. Salary £1,150 p.a. rising to £1,250 after probation. Pension Scheme. Staff canteen.

alary £1.100 p.m. Staff canteen.

Apply in writing to:
Chief Architect,
Gough Cooper & Co. Ltd.,
Wilmington House,
Wilmington, Dartford, Kent.

4709

SIX ASSISTANTS WANTED.
£1,000 to £1,500 per annum
According to ability.
Varied and Interesting Work. Five-day week. Luncheon Vouchers. Pension Scheme. Please apply: Leach, Rhodes & Walker, Chartered Architects, 90 Deansgate, Manchester, 3.

BREWERY ABCHITECT. Independent Brewery Company requires successor to the present Architect who is rejoining a family practice. The building programme includes annual provision for new public houses and alterations to existing houses. Applicants should have had five years' experience since qualifying. The salary offered is £1,200 per annum according to age and experience and in addition there is a pension scheme, an annual bonus and either a free house or a housing allowance. A car will be provided. Apply to J. Nimmo and Son, Limited, Castle Eden, Co. Durham. BREWERY ARCHITECT. Independent

A SISTANT COMPANY ARCHITECT. A progressive industrial Company has a vacancy for a young Architect at its Headquarters. The initial position is that of Assistant to the Company Architect who controls the design and construction of new buildings, using outside consultants, contractors and quantity surveyors. Before taking over the position, several months of Company and job training will be given to ensure confident acceptance of early responsibilities. These will be clearly defined and the new member will have the necessary authority to carry them out. The position will appeal to the young Architect who in a few years' time will develop the ability to direct all the architectural work in the Company and become the recognised expert in that field. Candidates should have an Honours degree in Architecture and be registered. They should be under 28 years of age and have had experience in the design and construction of industrial buildings. Salary, increments and other conditions are on an excellent basis, and suitable candidates will be able to discuss the matter in detail at a location convenient to themselves. Strict confidence will be observed. Please send brief details to Box 4706.

Strict Communication of the observed. Please send brief details to Box 4706.

STOP THAT COMMUTING! To ARCHITECTS in West Sussex we offer work on a wide variety of West African projects, prospects of service abroad, and £1,000 per annum. Apply in writing to Tecnic, Architects and Town Planners, 38 Sudley Road, Bognor Regis. 4698

A RCHITECTURAL ASSISTANTS, Intermediate or Finals standard, required in Chief Architect's office. Interesting and varied work. Five-day week, bonus, etc. Appointments permanent and superannuable. Write (in confidence) staking age, experience and salary required to Personnel Manager. Wates Limited, London Road, Norbary, S.W.16.

\*\*DINBURGH\*\* We have vacancies for DINBURGH\*\* We have vacancies for women) who combine considerable design ability with a comprehensive outlook. For suitable applicants unfurnished flats in the best residential part of the New Town are available. Eric W. Hall & Partners, Rock House, Calton Hill. Edinburgh.

EDINBURGH. ARCHITECTURAL ASSISTANTS required immediately for expanding practice. Please write giving details of age, experience and salary required to Law and Dunbar-Nasmith, 54 Frederick Street, Edinburgh.

HICKSON & WELCH LTD., Ings Lane, Castleford, require an ARCHITECT. The post would suit a qualified person about 30 years of age willing to work and take responsibility. A starting salary of £1,250 is offered. Usual facilities. Apply to the Group Architect. 4706

MOIR & BATEMAN, in association with M. K. McCann of Rochdale and Manchester, shortly moving into larger new offices require ASSISTANTS of Intermediate to Final standard at their head office in Rochdale. Salary according to ability and experience. Reply giving particulars to Moir & Bateman, Prudential Buildings, South Parade, Rochdale.

A RCHITECTS in London offer up to £1,500 a
year, plus various benefits, to capable
SENIOR ASSISTANTS. Lesser salaries ouered
to more junior men. Reply giving brief particulars, age, and experience, and qualifications
to Box 4713.

EDWARD D. MILLS & PARTNERS require
ASSISTANTS of Intermediate and Final
standard. Write, giving details of training, experience and salary required to 9-11 Richmond
Buildings, Dean Street, Soho, London, W.1. 4715

A SSISTANTS of Intermediate standard required in busy provincial office. Contemperary outlook welcomed. Opportunity given to handle contracts from inception to completion. Facilities given for study at London Schools one day per week, if required—fare and fees paid. Salary £750—£900 according to ability, Hare & Pert, A/A.R.I.B.A., 29 Elm Street, Ipswich.

A RCHITECTS, male and female, interested in a change of work and environment, would find it worth the few minutes required to make an enquiry and fix an appointment about vacancies in a large London City Office. Excelent salaries, L.Vs. and Pension. Box 4718.

LEY, COLBECK & PARTNERS, FF.R.I.B.A., require ARCHITECTS for interesting new projects. Good salaries, L.Vs. and Pension. Bishopsgate, London, E.C.2, or telephone LON

CBOYDON Architects require FULL and/or PART-TIME ASSISTANT. Apply in writing stating salary required and availability. Box 4665.

A RCHITECTURAL STAFF required by Basil Spence & Partners. Write stating details of experience and salary required to 40 Moray Place, Edinburgh, 5.

PAN DEVELOPMENTS require ASSISTANT with a background of architectural training and a serious interest in estate development. This is a new post with good prospects. Brief details please of education, training and experience to Span Developments Limited, Parkleys, Ham Common, Richmond, Surrey. 4681

ASISTANT ARCHITECT required primarily to supervise Flats now under construction. Good knowledge of building construction and site supervision essential. Single man preferred as accommodation difficult. Good salary and prospects after completion of Flats. Apply in writing, giving details of qualifications and experience, to Box 4677.

GEORGE WIMPEY & CO. LIMITED

AN expanding programme of work in the
Architects Department offers ARCHITECTS
and ASSISTANTS with experience and ability
good opportunities to work as Project Architects
and Leaders of design and construction groups
on work covering various types of Industrial,
Commercial and Domestic Projects of considerable size and interest.
Permanent appointments, with good progressive salaries for the right men, are immediately
available at Head Office.
Five-day week and Pension Fund available.
Similar appointments are also available in our
Regional Offices for applicants preferring to
work in the Midlands or North of England areas.
Applicants should write to: E. V. Collins,
A.R.I.B.A., Chief Architect, 27 Hammersmith
Grove, London, W.5.

CHIEF ARCHITECT required to lead the architectural side of a combined team of Architectes, Engineers and Surveyors designing a wide variety of projects on a national basis. This post will appeal to a man aged 32 to 40 who is keen to develop new design concepts and forms of construction. The position will command a substantial salary and there are excellent prospects for a man with drive and ability. The headquarters are situated in a pleasant town in the South Midlands. Please give full details of education, professional qualifications and experience to Box 4735.

DURLES & NEWTON need ASSISTANTS,
Final standard, in London and Southend
offices. Excellent prospects and opportunities
for wide experience offered to the right men.
Five-day week, bonus and pension scheme. '26
Great James Street, W.C.1. CHA 9638. 4724

A SSISTANT SENIOR ARCHITECT, 21,250—
22,650, required to take charge of new Glasgow Office of Messrs. Boissevain & Osmond of London, Epsom and Dublin. This post offers wide scope for a man of ability and initiative. Pleasant offices have been taken at No. 2 Clairmont Gardens, Glasgow, C.3. Apply in writing to Glasgow office.

BRISTOL architects with small, informal but hectic office require JUNIOR ASSISTANT with some experience, prepared to work hard and use initiative in return for good salary and a minimum of messing about by the partners. Beckingsale & Partners, 36 Whiteladies Road, Bristol, 8.

PATON ORB AND PARTNER require
JUNIOR and SENIOR ASSISTANTS,
up to the age of 25, whose ambition is sustained
by ability. 40 Goodge Street, W.1. Telephone:
LANgham 6169.

BRISTOL. SENIOR and JUNIOR ASSIS-for appointment. Bernard Lowe, L.B.I.B.A., 8 Queen Square, Bristol 1.

R OBERT MATTHEW & JOHNSON MARSHALL have vacancies in their London office for ARCHITECTS at all levels of experience for a variety of interesting jobe. Apply to Robert Matthew & Johnson-Marshall. 24 Park Square East, N.W.1.

SENIOR OR JUNIOR ARCHITECTURAL ASSISTANT, male or female, required by national group of Building and Civil Engineering Contractors at Head Office situated in Westminster. Interesting and varied work. Staff position with Pension and Life Insurance benefits. Write giving particulars of age, qualifications, experience, etc., to Box 4736.

FREDERICK GIBBERD's London office re quire ASSISTANTS who are really in terested in architecture, wide range of work Salary according to ability. Five-day week Luncheon vouchers. Phone for interview, LANG ham 6385.

CHIPPINDALE & EDMONDSON require for their Darlington office ASSISTANTS of all grades. Good salaries, luncheon vouchers and five-day week. Applications, endorsed "Staff-Private," to be forwarded to 37a Tubwell Row. Darlington. Private." to Darlington.

£1.800 per annum offered to experienced a RCHITECTS and ASSISTANTS on short-term appointments for periods up to 18 months. Interesting work on large industrial building projects. Please write, in confidence, giving brief particulars to Box 4744.

A RCHITECTURAL ASSISTANTS, to Intermediate standard or above, required in Wimbledon office for interesting work U.K. and overseas. Five-day week; no travelling to town. Apply J. E. K. Harrison, F.R.I.B.A., Eagle House, Wimbledon, S.W.19, or phone WIM 4244.

KENNETH W. NORTON AND PARTNERS require a SENIOR ASSISTANT to work on a variety of interesting projects in most parts of the country. Must be capable of taking charge of schemes from sketch design to completion. Good salary. Reply giving details to Barclays Bank Chambers, 175 Hockley Hill, Birmingham 18.

A SSISTANTS of up to Intermediate standard and up to Final standard required by expanding office. Unfurnished accommodation probably available. Apply in writing stating age, experience and salary to Marsh and Waite. A.R.I.B.A., 14 King Street, King's Lynn, Norfolk.

DETER BAREFOOT requires Final standard ASSISTANT, for work on Hospital, Bank and Domestic contracts. Salary according to ability. Car allowance, five-day week, good saling area. Write 22 Thorofare, Ipswich. 4753

Ing area. Write 22 Thorotare, Ipswich. 4755

IMMEDIATE vacancies available in medium sized offices in Southampton and Salisbury for qualified ARCHITECTS for work at all stages on contracts up to £250,000 in value forming part of a varied building programme. Apply in writing giving details of experience and salary required to: Robert Potter & Richard Hare. F/A.R.I.B.A., De Vaux House, Salisbury. 4754

#### Architectural Appointments Wanted

per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

YOUNG married ABCHITECT now anticipates a partial release from domesticity is anxious to do working drawings, etc., at home or part-time. Phone Barnet 7384.

SENIOR ASSISTANT, 18 years' varied first class experience. London area W. or S.W. preferred. Salary £1,500 with share of profits.

DIPL. ARCH., A.R.I.B.A. (31), eight years' post graduate experience private practice London in senior executive position, requires senior post in London/8, Herts Area. All propositions will be considered in confidence. Box

WEST INDIES. ARCHITECT, thoroughly conversant office organisation, supervision, contracts, would like partnership or senior position in West Indies or American area. Experienced tropical. Reply Box 4695.

EXPERIENCED ASSISTANT seeks permanent position with partnership prospects. Box

JUST ARRIVED FROM THE U.S.A.,
DRAUGHTSMAN REQUIRES POSITION
IN ABCHITECTS', ENGINEERS' OR CONTRACTORS' OFFICE, AGE 24, FOUR YEARS'
EXPEBLENCE, AVAILABLE IMMEDIATELY,
PREFERENCE FOR E. ANGLIA. BOX 4679.

GENTLEMAN (Foreign Dipl.) age 35, with 20 years' design experience, seeks evening and years' design experience, seeks evening and end homework. Please ring MAIda Vale 6690

#### Other Appointments Vacant

per line; minimum 12a. Bos Number, including forwarding replies, 2s. estre.

DRAUGHTSMAN SHELL-MEX AND B.P. LIMITED require for their London Office one ARCHITECTURAL DEAUGHTSMAN for werk on various commercial projects. Applicants should be quick and accurate draughtemen and should have a sound knowledge of building construction. Salary according to experience. Excellent working conditions, staff restaurant, sports club, etc. We regret that second applications cannot be considered. Apply in writing giving full details of age, qualifications and experience to:—

full details on each, note to:

The Staff Manager (Ref. CA/126),
Shell-Mex Ard B.P. Ltd.,
Shell-Mex House,
Strand,
London, W.C.2.

SENIOR ARCHITECTURAL DRAUGHTSMAN. Taylor Woodrow (Arcan) Ltd.
require a SENIOR ARCHITECTURAL
BEAUGHTSMAN. The work is interesting and
varied, and is generally concerned with prefabrication. Applicants should have first class practical experience, and ability to take responsibility.
Please reply, giving full details of are, experience
and salary, to the Office Menager, 41, Welbeck
Street, London, W.L.

MENDAGY WACANCIES.

DUSINESS VACANCIES BUREAU have vacancies for DRAUGHTSMEN. ESTIMATORS, QUANTITY SURVEYORS, etc.—
Permanent Positions. (No Fees.) Call: 28, Victoria Street, Victoria, S.W.I. Abbey 4624.

DRAWING OFFICE MANAGER required in London office. Must be fully conversant with organisation, administration and practical supervision of various building works of all kinds. Fiveday week, luncheon vouchers. Salary starting at 21,000 p.a. based on capabilities and experience. Box 4519.

QUANTITY SURVEYOR, approaching Final standard, capable of carrying out final accounts and all normal Quantity Surveyor's duties, required for West End Office. Salary according to age and experience. Please write giving full particulars to Box 4884.

QUANTITY SUEVEYOR, approaching Final standard, capable of carrying out final accounts and all normal Quantity Surveyor's duties, required for Home Counties Office. Salary according to age and experience. Please write giving full particulars to Box 4555.

DRAUGHTSMEN AND ARCHITECTS (both structural and shopfitting) required by nationally known multiple firm for their permanent staff. Excellent working conditions and plenty of scope for interested men. A number of posts are available for men ranging from 22 years to those fully qualified and experienced. Superannuation fund. Staff restaurant. Please send details of experience and salary required to Box 4329.

WORKER-UP required in Quantity Survey-ing section of West End architects' office. Reply to Box 4717 giving details of age, ex-perience and salary required.

TECHNICAL REPRESENTATIVES are required by the Sealants Division of a large manufacturing group for the London and Birmingham area.

The men we seek will have experience in Building Construction and Design and the ability to interpret architectar plans and drawings, some sales experience and a connection with Architects and Contractors will be an advantage but not essential.

The remuneration and prospects are attractive, basic four-figure salary, guaranteed commission with car provided and other expenses paid.

Applications should be addressed to Sales Manager, T. & W. Farmiles Ltd., Scalants Division, 88 Nine Elms Lane, London, S.W.S.

NOISY CISTERNS SILENCED

with the CRAIG "SILENT" BALLCOCK
By introducing the CRAIG SILENT BALLCOCK
in W.C. cisterns and attic supply tanks, irritating CISTERN NOISE and WATER HAMMER is effectively removed. So constructed that back syphonage is impossible, the "CRAIG" fits any make of cistern and costs as little as 62.9.0.

INDISPENSABLE IN MONES, HOSPITALS, HOTELS, OFFICES, CLUBS, ETC. Write for particulars to



The SILENT BALLCOCK COLLEGE WORLD AND PROMISE A DURGER SCOTLAND PARK PROFILED TO

BUYING NEW FURNITURE? VISIT THE

URNITURE SHOW EARLS COURT

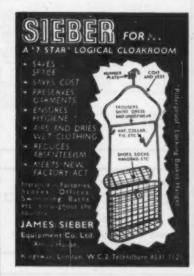
FEB 1 to FEB 11 Trade Preview 388 88-81



D. & J. TULLIS LTD.

CLYDEBANK, SCOTLAND

Tel: Clydebank 1861/2/3/4/8 Branches also at London, Birmingham and Manchester



#### MODELS

for Architects & Civil Engineers

by John B. Thorp

98 GRAY'S INN ROAD, LONDON W.C.I. Tel: HOLborn 1011

WELL ESTABLISHED London firm of Architects are constantly requiring the services of a first class PERSPECTIVE AETIST. Replies please to Box 467L.

SHOPFITTING DRAUGHTSMAN and DE-SIGNER required in Architecta' Office for work on Multiple Stores. Salary by arrange-ment. Stanley R. Nevell & Partners, 34 8mith Square, S.W.1. ABBey 3971.

#### Services Offered

per line; minimum 12s. Bos Number, including forwarding replies, E. extra.

ARCHITECTURAL MODEL
MAKERS, We offer the highest grade
work with speed and reliability.—Please 'Phose
Woolwich 1262 or write 6, Pelham Crescont,
Hastings.

A RCHITECTURAL, Civil Engineering, Land. Building and Quantity Surveying services on fee, lump sum or quantum meruit basis Tel. SiLverthorne 7561.

SURVEYS. Large or small, drawn to large scales, accuracy guaranteed. Structural sewerage, sewage disposal, sanitary plumbing and drainage design. The Site Survey Company, London, S.E.J. Telephone LEE Green 7444. 6666

FULLY experienced in all Building and Architectural work, I am available to undertake: Designs, Working Drawings, Desalis, Burveys, Specifications, Models, etc. Just telephone Wallington 9835 (near Croydon) and I will call anywhere and take your instructions. Box 5548.

SURVEY OF LAND or buildings also Speci-fications, quantities and final account-prepared for new or conversion work. LIV. 1839.

MODELS AND COLOUR PERSPECTIVES.
Charles Houthuesen offers work of the
highest quality. 15, Thames Street, Sunbury-onThames, Middlesex. Sunbury 3728. 2339

A BCHITECTURAL MODELS.—Tomas R. Bartlett and Pariners specialise in this work. 5 King's Ave., W.5. Phone Perivals 685 6176

66 NAPIBR Models." Specialists in Archi-tectural work. Stanley Studies, S.W.16 FLAXMAN 2115.

PLUMBING, DRAINAGE and Water Services Schemes designed by fully qualified engineers having unrivalled knowledge of tail buildings and latest techniques. General arrangement drawings only or fully detailed schemes and quantities. Strictly confidential. Box 4351.

YOUNG practice, early stages, can offer qualified services to profession. Design and working drawings; perspectives. Box 4628.

E E D P ONE WORSLEY COURT, LONDON N.W.J.

SPEEDPLAN offer a comprehensive design and advisory service to all concerned with HEATING, AIR-CONDITIONING, PLUMBING OR ELECTRICAL INSTALLATIONS Telephone Swiss Cottage 3084.

RECENTLY established practice offers aer-vices to other firms. Any type of work anywhere within reach of London (car-owases). Payment on basis of time or part fee. Box 4751.

HELP offered to rich and successful architects by school-trained Associate. Ten years'
experience since qualifying. Own minute practice leaves some forty hours per week free.
London, Home Counties, not excluding Birmingham and the far Northlands. Box 4738.

DESIGN AND DEVELOPMENTS
LIMITED
Architectural Services
Land Surveys — Designing — Layor
Detailing — Perspectives
Westminster Bank Chambers,
Ashatead, Surrey,
Telephone: Ashatead 5147. Layoute

4725

For Sale and Wanted per line; minimum 12s. Boe including forwarding replies, 2s. on

CRBOSOTE, 40 gallons 90s., delivered in free drum; REFINED TAR (needs heating) 93s. 4d.; BARN TAR (can be painted on cold) 96s. 8d. Coopers, Builders' Merchants, Ashford Kont.

LANGHAM HOUSE luxury cetate,
Much admired. Two bedroom fat. 997
lease. £3,956. Phone KIN 6008.

light sea green, olive green & blue



or Facings, Foundation Stones. Paving and Flooring, Steps, Cills, Shop Fronts, Surrounds, Pilasters, Fireplaces and all irchitectural work.

Send for technical pamphiets: 1. Flooring 2. Facings 3. Coping 4. Cills 5. Riven Faced Slabs.

BROUGHTON MOOR GREEN SLATE QUARRIES LIMITED, Coniston, Lancashire

Telephone: Coniston 225/6 Telegrams: Cann, Coniston

INDUSTRIAL, RESIDENTIAL AND LOCAL GOVERNMENT DEVELOPMENTS. DOCKS AND NARBOURS



34e Findon Road, Worthing, Sussex Telephone: Finden 3089

### KIRKSTONE

GREEN SLATE FOR WALL CILLS, CLADDING, COPING, FLOORING, PAV-ING, ETC.

The slate from our quarries has been used for these purposes for over 50 years. Our accumulated experience is offered to Architects in the services of our Technical Staff and illustrated literature.

Service in Slate KIRKSTONE GREEN SLATE QUARRIES Ltd. Ambleside; Westmorland

Tel.; Amb. 3270

Partnership and Financial

5s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

POR SALE. Architectural practice in Yorkshire. Established over 50 years. £1 million worth of contracts in hand. Premises on long lease. Box 4699.

COUNTRY PRACTICE FOR SALE, N. Bucks
-Northants area. Box 4684.

#### Premises To Let

per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

DECENTRALIZED OFFICES
SOUTH LONDON (near Croydon) opposite main
S.R. station. Floor areas of 460, 2,000 and
2,600 aq. ft. at 13/-d. per sq. ft.
KEITH CARDALE, GROVES & CO.,
43 North Audley Street, W.1. GRO. 8551. 4637

#### Miscellaneous

per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of Fencing, Gates and Cloakroom Equipment. — Harvest Works. 96/107, St. Pauls Road, N.I. Canonbury 2861, 2893

HANDMADE, CLAY TILES available in many beautiful colours. The perfect reofing material with the longest life. Particulars. samples and brochure from G. Tucker & Son, Ltd. Longhborough 3446/7.

CROGGON & CO. LTD.—Chain Link Fencing and all types of Wrought Iron Fencing supplied and erected.—230, Upper Thames Steen. London, E.C.4. CENtral 4322. 9429

#### **Educational Announcements**

per line: minimum 12s. Bos Number, including forwarding replies, 2s. extra.

R. I.B.A. and T.P.I. BXAMS.—Stuart Stanley
G. A. Crockett, M.A./D.A., F./P.R.I.B.A.
M./A.M.T.P.I., prepare Students by correspondence, 16, Adelaide Street, Strand. W.C.2. TRM, 1963/4.

LEEDS COLLEGE OF ART
School of Architecture and Town Planning
ARTHUR LOUIS AARON V.C. SCHOLARSHIP
THE Management Committee invite applications for this Scholarship of £250, open to
past or present atudents, who, at the time of
taking up the award, hold the Diploma in
Architecture of the School. The Scholarship is
awarded for travel and study in Architecture.
Applications should reach the Head of the
School of Architecture and Town Planning, 43x
Woodhouse Lane. Leeds 2 (from whom further
details are available) by the 3lat December, 1960.
GEORGE TAYLOR.
Chief Education Officer.

Education Department, Calverley Street, Leeds 1.

#### FULL OR SUPPLEMENTARY TUITION

Provided by correspondence for R.I.B.A. examina-tions. Revision Courses also available in any subject. Descriptive brochure on application

ELLIS SCHOOL OF ARCHITECTURE Principal: A. B. Waters F.R.I.B.A., F.I.Arb. 1838, Old Brompton Rd., London, S.W. 7 and at Albany House, Worcester.

There are six

Architects' Journal information sheets describing the wide range of Wincilate cills, cladding,

copings and other trim. The Bow State & Enamel Co Ltd The Town Hall Bow Road E3 ADV 2203





IT SAVES TIME & MONEY to specify

# STAGE EQUIPMENT

A very comprehensive design and advisory service is available to Architects for Schools, Public Halls and the like.

W. J. FURSE & CO. LTD.
TRAPPIC ST, MOTTIMEMAN — LONDON, MANCHESTER

combined shuttering and reinforcement

long span metal lathing



No other type of fence is as strong an durable. The panels are pressure creosote timber and posts of granite concrete. ALL CONDITIONS PROVIDED FOR

T. G. FENCING, Elborow Street, RUGBY

#### BUSH HOUSE

**Broad Street** for Birmingham Corporation

Architects Harry W. Weedon F.R.I.B.A. & F Another prominent building attractively faced

HERNWARE FAIENCE

Send for details to Dept.A]. HATHERNWARE LTD. LOUGHBOROUGH, LEICS. Tel: Hathern 273/4.

FIRST FOLI

#### AJ enquiry service

If you require catalogues and further information on building products and services referred to in the advertisements appearing in this issue of the Architects' Journal please mark with a tick the relevant names given in the index to advertisers overleaf. Then detach this page, write in block letters, or type, your name, profession or trade and address in the space overleaf, fold the page so that the post-paid address is on the outside and despatch. We will ensure that your request reaches the advertisers concerned.

Postage will be paid by Licensee

FOLD HERE

No Postage Stamp necessary if posted in Great Britain or Northern Ireland

BUSINESS REPLY FOLDER Licence No. S.W. 1761

THE ARCHITECTS' JOURNAL
9-13 Queen Anne's Gate
London, S.W.1.

## Alphabetical index to advertisers

	PAGE	(	ODE		PAGE		CODE		PAGE	2	col	DE
Acme Flooring & Paving Co.				Gas Council	128		0246	Peglers, Ltd	59	D	04	155
(1904), Ltd	2		0004	General Electric Co., Ltd	83		0929	Permanite, Ltd	118	T	04	58
Air Heating, Ltd	123	n	1017	Gent & Co., Ltd	27	n	0251	Philips Electrical, Ltd	62		04	162
Airserew Company & Jiewood,	19.00	-		Glass Benders Association	4		1033	Philips Electrical, Ltd	92	n	11	148
	101		0011	Gliksten Doors, Ltd	134	F	0255	Phoenix Rubber Co., Ltd	137	Ħ	04	163
Alcan Industries Ltd 74	1. 75	n	0441	Goodyear Tyre & Rubber Co.		_		Pilkington Brothers, Ltd	36		14	174
Allied Ironfounders			1061	(G.B.), Ltd	127		1116	Plastics Marketing Co., Ltd	11		09	199
Anderson, D., & Sons, Ltd	69	n	0022	Grecon Systems, Ltd	64	n	0260	Portable Concrete Buildings, Ltd.	141		17	100
Architectural Press Ltd	145		0026	Greenwood Airvac Conduits, Ltd.	23		0262	Precon, Ltd	82		08	113
Architectural & Terrain Models	152		1153	Greenwood & Hughes, Ltd	122		0261	Premise Engineering Co	126	D	11	183
Armstrong Cork Co., Ltd	28		0028	Gyproc Products, Ltd	53	n	0266	Preservation Developments Ltd	145		10	113
Armstrong Patents Co., Ltd	140		0029	Gypsum Plasterboard Development		-		Pullin, R. B., & Co., Ltd	140		09	074
Association of Vermiculite Exfoli-		-		Assn	35		0267	Pyrok, Ltd	134		07	41
ators	111		0144			-				Name and		
Atkins, W. S	142		-									
Atlas Stone Co., Ltd	20		1056	Hall, J. & E., Ltd	77		0270	Alaska Assartan and Santa				
Automatic Pressings, Ltd	139		0042	Hardtmuth, L. & C. (Great				Quickset Water Scalers, Ltd	131		07	95
				Britain), Ltd	109		1154					
				Harris & Sheldon (Electrical), Ltd.	38		0280	7				
B.F.M. Exhibitions	151			Hartley, V. & N., Ltd	52		0282					
Bartlett, G. F. E., & Son, Ltd	65		0978	Hathernware, Ltd	152		0691	Radiant Heating, Ltd	91		04	193
Batley, Ernest, Ltd	137		0052	Hattersley (Ormskirk), Ltd	86		0846	Radiation Group Sales, Ltd	103		10	906
Beves & Co. (Joinery), Ltd	37		0062	Haunchwood Brick & Tile Co.,				Rawlings Bros., Ltd	139		04	199
Bigwood, Joshua, & Son, Ltd	68		0065	Ltd	40		0825	Rawlplug Co., Ltd	97		0.5	500
Bilston Foundries, Ltd	110		0067	Heatrae, Ltd	135	n	0287			boom		
Birmingham & Blackburn	141	n	0069	Hills (West Bromwich) Ltd			0297					
Bolton Gate Co., Ltd	142		0078	Hollow Seal Glass Co., Ltd		-	0301					
Boulton & Paul, Ltd	142	n	1065	Home Fittings (Great Britain),		-		ST. D. Floatele 744	194	-	2.4	100
Bow Slate & Enamel Co., Ltd	159	Ħ	0083	Ltd			0307	S.L.R. Electric, Ltd	134		11	109
Bowater Sales Co., Ltd			0082	Hornitex (Plastics), Ltd			0847	Sandlime Brick Manufacturers		-	-	
Briggs, William, & Sons, Ltd	95	H	0088	Hughes, F. A., & Co., Ltd		Second	0722	Assc., Ltd.				531
British Bitumen Emulsions, Ltd.	22	H	0091	Humasco, Ltd			0941	Savage & Parsons, Ltd				539
British Geon, Ltd	124	H	0080	22 424 424 424 424 424 424 424 424 424	, 100	ш		Sculthorp, R., & Co., Ltd				541
British Industrial Engineering	84	H	0096					Seaboard Lumber Sales Co., Ltd.	99			542
British Paints, Ltd	9	H	0099					Shell Chemical Co., Ltd	52			964
British Sanitary Fireclay Associa-			0000	Ibstock Brick and Tile Co., Ltd			0323	Shires & Co. (London), Ltd	42		9.5	554
- The second sec	109		0177	Imperial Chemical Industries, Ltd.		hand	0319	Shoreditch Borough Council	144		-	-
Parameter Man Comes Slate	104		OLII	Industrial Engineering, Ltd			0322	Sieber, James, Equipment Co.,				
Broughton Moor Green Slate	150		0115	Intermit, Ltd	33		0936	Ltd	151			905
Quarries, Ltd 117,			0115					Siemens Edison Swan, Ltd	16			559
Burgess Products Co., Ltd	12	П	0121					Simms, W. J., Sons & Cooke, Ltd.	14		07	727
				Kay & Co. (Engineers), Ltd	135		0715	Simon-Carves, Ltd	63		01	933
Table 1 Total Laboratory		-	0000	Kerner-Greenwood & Co., Ltd			0339	Simplex Electric Co., Ltd	48		04	564
C.I.B.A. (A.R.L.), Ltd	78		0736			Second		Smith, S., & Sons	56		11	167
Calders, Ltd	32		0127	King, Geo. W., Ltd.		Ш	0342	Sommerfelds, Ltd	1		0.	576
Carron Co	34		0132	Kirkstone Green Slate Quarries		_	0000	Standard Patent Glazing Co., Ltd.	128	9	0/	585
Cement Marketing Co., Ltd	106		0136	Ltd	152		0739	Sterdy Telephones, Ltd	120			763
Colt Ventilation, Ltd	8		0152					Stewart & Gray, Ltd			,	600
Compactom, Ltd	17		0153					Stott, James, Ltd	10			602
Concrete, Ltd	108		0154	Laing, John, & Son, Ltd			0345	Sulzer Bros. (London), Ltd	5			606
Corrie, J. B. (Flextella), Ltd	141		0228	Lead Development Association	136		0709	Surfex Flooring Co., Ltd	125	-		114
Costain Concrete Co., Ltd	115		1100	Leaderflush (Doors), Ltd	4.5		0347			-		613
Craig Silent   'loock	151	H	0916	Leca (Gt. Britain), Ltd	120		1182	Swiftplan, Ltd	2	-	01	010
Cullum, How W., & Co., Ltd	93	Ħ	1131	Limestone & Green Slate Slab Co								
California and California		book		(Westmorland), Ltd	148		0357			1		
				Limmer & Trinidad Lake Asphal	t			T C Females	15	9 -		104
Davidsons Paper Sales Ltd	88		0178	Co., Ltd	43	3	0358	T. G. Feneing	10	2	1 2	101
Du Pont Co. (United Kingdom),	00	-	9410	Low, Archibald & Sons, Ltd			0368	Thames Plywood Manufacturers,				
	98		0818					Ltd.	51	Section		124
Ltd	20		0010					Thermacoust, Ltd	13.	-		629
				Mallinson, William, & Sons, Ltd	. 112	3	0379	Thorp, John B	15	I L	1 0	633
Electrical Development Ass	125	M	0095	Merchant Adventurers, Ltd	-		0407	Timber Development Association,		0 -		
Ellis School of Architecture	152		0202	Minnesota Mining & Manufactur		-		Ltd		6		63.
English Clock Systems, Ltd	121		0205	ing Co., Ltd.		4	1048	Tomo Trading Co., Ltd	2	9	] 0	637
Evede, Ltd.		distant.	***	M.K. Electric, Ltd.			0416	Troughton & Young (Lighting),				
Expanded Metal Co., Ltd	41	H	0878	Monsanto Chemical		-	0421	Ltd	6	-		0640
respondent to the second	**	U		Montgomerie, Stobo & Co., Ltd			0422	True Flue, Ltd				0641
				Morris, M. A., Ltd.		Name	0914	Truscon, Ltd				0643
F.E.B. (Great Britain), Ltd	7		0216	Morris Singer Co., Ltd		- Name	0424	Tullis, D. & J., Ltd	15	I	1 1	1164
	89		0214	Morris Singer Co., Dut.	. 200	_	0424					
Falk, Stadelmann & Co., Ltd Falk, Stadelmann & Co., Ltd	130		0893									
	130	1		National Salt Glazed Pipe Manus								
Ferodo, Ltd.		book	0218	The state of the s		0	1 1004	United Kingdom Provident Insti-				
Fibreglass, Ltd	15		0219	Assn.			1034	tution		8 [	1 0	0650
Fineh, B., & Co., Ltd	132	Swand	1181	Newalls Insulation Co., Ltd			0433		2.0	ho	-	
Flinkote Co., Ltd	90	Second	0229	Newman, William, & Sons, Ltd		6						
Floor Quarry Association	26	- Samuel	0230	Newton Chambers & Co., Ltd								
Furse, W. J., & Co., Ltd	152		0241	North British Linoleum Co., Ltd.	1	3	0829					
				us Open, Drawings, Tracings, etc., Ed 143, 144, 146, 147, 148, 149, 150, 151, 15		nal	, Legal	Venesta Plywood, Ltd Versatile Fittings		9 [		065( 066;
Write in block letters or two	M. W	OHI	neme	, profession, and address belo								
					44.9						-	
and fold so that the post-pai	d ad	dre	ess is c	on the outside.				Walker, Crosweller & Co., Ltd		8		066
								Wallpaper Manufacturers, Ltd			annot .	067
								Walpamur Co., Ltd		17		004
NAME		-				_	_	Ward & Co. (Letters), Ltd		15		067
								Weatherfoil, Ltd		11		068
PROFESSION		_					_	Wednesbury Tube Co., Ltd		13	] (	068
								Wiggin, J. & J., Ltd		80 [		118
ATTENDED								Williamson, Jas., & Son, Ltd		07 [		069
							_	Winn, Charles, & Co., Ltd				069
								Wright, John				117
							-			-	-	



# WITH THE REGD TRADE MARK

PAT. No. 643103

**REGD. DES. 858877** 

#### ROLL HOLDER









- the effective barrier against the "couldn't care less" mentality that litters staff toilets—at the firm's ex-pense. The Toilok Toilet Roll Holder "rations" one sheet at a time by rations" one sheet at a time by special device, and is equipped with thief-proof fitting. Toilok stands up to hard usage and provides an answer to your overheads problem.

Te are exhibiting at the entre, Store Street, To ourt Road, W.C.I.

#### R.SCULTHORP & CO LTD

DEPT. TIO, BLACKFRIARS HOUSE, NEW BRIDGE STREET, LONDON, E.C.4 TELEPHONE: FLEET STREET 5754 (5 LINES)

# Ensure perfect flue operation

with the

# TRUE FLUE Triple Unit

This refractory concrete membrane attachment obviates the difficulty experienced in the past in adequately throating the "gather-over" above a back boiler appliance owing to provision having to be made for the back flue. The True Flue Triple Unit Type "U" has been designed so that the Membrane Unit can be bedded in the correct position spanning the flue opening, providing adequate space for the back flue and correctly throating the fire. The cost of a rough lintol, if used, together with expensive labour involved in building up the gather-over more than offsets the cost of a Triple Unit, which is simply placed in position and the job is done.

Triple units with Back Attachments where required, are suitable for all open fire appliances with or without back boilers, and for free-standing stoves.

# TRUE FLUE

LIMITED

CONVECTOR HOUSE, ACACIA ROAD, ST. JOHN'S WOOD, LONDON, N.W.S.

TELEPHONE: PRIMROSE 7261/3/3

# Alphabetical index to advertisers

1	PAGE	C	ODE	PAGE		CODE		PAGE		col	
Acme Flooring & Paving Co.				Gas Council	- Control	0246	Peglers, Ltd.	59		04	
(1904), Ltd	2		1004	General Electric Co., Ltd 83		0929	Permanite, Ltd	118		04	
Air Heating, Ltd	123		1017	Gent & Co., Ltd 27		0251	Philips Electrical, Ltd.	62	片	04	
discrew Company & Jiewood.		_				1033	Philips Electrical, Ltd	92		11	
	101		1011	Gliksten Doors, Ltd 134	$\Box$	0255	Phoenix Rubber Co., Ltd	137	H		63 74
Alean Industries Ltd 74		Second 1	0441	Goodyear Tyre & Rubber Co. (G.B.), Ltd		1116	Pilkington Brothers, Ltd	11	H		99
	112		1061			0260	Portable Concrete Buildings, Ltd.	141	Ħ		00
Anderson, D., & Sons, Ltd	69		0022	Greenwood Airvac Conduits, Ltd. 23		0262	Precon, Ltd.	82	H		13
Architectural Press Ltd	145		1153	Greenwood & Hughes, Ltd 122		0261	Premise Engineering Co	126	H		83
Architectural & Terrain Models  Armstrong Cork Co., Ltd	28		0028	Gyproe Products, Ltd 53		0266	Preservation Developments Ltd	145	Ħ		13
Armstrong Patents Co., Ltd		house?	0029	Gypsum Plasterboard Development	-		Pullin, R. B., & Co., Ltd	140	Ħ	09	74
Association of Vermiculite Exfoli-	140	П.	0000		5 [	0267	Pyrok, Ltd	134	Ħ	87	41
ators	111	m.	0144		had						
Atkins, W. S.	142	H.									
Atlas Stone Co., Ltd	20	H	1056	Hall, J. & E., Ltd 73	7 [	0270					
Automatic Pressings, Ltd	139	Ħ.	0042	Hardtmuth, L. & C. (Great			Quickset Water Sealers, Ltd	131		07	95
Table 1 and 1 and 1					9	1154					
				Harris & Sheldon (Electrical), Ltd. 38	8	0280					
B.F.M. Exhibitions	151			Hartley, V. & N., Ltd 51	2	0282					
Bartlett, G. F. E., & Son, Ltd	65		0978	Hathernware, Ltd 153	2	0691	Radiant Heating, Ltd				
Batley, Ernest, Ltd	137		0052	Hattersley (Ormskirk), Ltd 80	6	0846	Radiation Group Sales, Ltd	103			106
Beves & Co. (Joinery), Ltd	37		0062	Haunchwood Brick & Tile Co.,	_		Rawlings Bros., Ltd	139			199
Bigwood, Joshua, & Son, Ltd	68	hand.	0065		0		Rawlplug Co., Ltd	97		0.5	500
Bilston Foundries, Ltd	110	Segret	0067	Heatrae, Ltd		0287					
Birmingham & Blackburn	141		0069	Hills (West Bromwich) Ltd 130	- phone	0297					
Bolton Gate Co., Ltd	142		0078	Hollow Seal Glass Co., Ltd 9	8	0301					
Boulton & Paul, Ltd	142	Name	1065	Home Fittings (Great Britain),	n p.	0202	S.L.R. Electric, Ltd	134		1	09
Bow Slate & Enamel Co., Ltd	152		0083		0	0307	Sandlime Brick Manufacturers				
Bowater Sales Co., Ltd5			0082	Hornitex (Plastics), Ltd 4		0847	Assc., Ltd	138			531
Briggs, William, & Sons, Ltd	95	leased.	0088	Hughes, F. A., & Co., Ltd		0941	Savage & Parsons, Ltd				539
British Bitumen Emulsions, Ltd.	22		0091 0080	Humasco, Ltd 104, 10	9	0041	Sculthorp, R., & Co., Ltd				541
British Geon, Ltd	124		0096				Seaboard Lumber Sales Co., Ltd.	99	H	0.	542
British Industrial Engineering	9	Second	0099				Shell Chemical Co., Ltd	27		01	964
British Paints, Ltd.	38		0000	Ibstock Brick and Tile Co., Ltd 11		0323	Shires & Co. (London), Ltd	47		0.	554
British Sanitary Fireclay Associa-	109		0177	and the second s	4	0319	Shoreditch Borough Council	145	ш		
Broughton Moor Green Slate	100	_			1	0322	Sieber, James, Equipment Co.,	151		0	905
Quarries, Ltd 117	152	П	0115	Intermit, Ltd 3	3	0936	Ltd	16			559
Burgess Products Co., Ltd	72	H	0121				Simms, W. J., Sons & Cooke, Ltd.	14			727
marge a route con man		had					Simon-Carves, Ltd.	63			933
				Kay & Co. (Engineers), Ltd 13		0715	Simplex Electric Co., Ltd	48			564
C.I.B.A. (A.R.L.), Ltd	78	П	0736	***************************************	10	0339	Smith, S., & Sons	56			167
Calders, Ltd.	32		0127	King, Geo. W., Ltd 13	17	0342	Sommerfelds, Ltd	1			576
Carron Co	34		0132	Kirkstone Green Slate Quarries.			Standard Patent Glazing Co., Ltd.	128		0	585
Cement Marketing Co., Ltd	106		0136	Ltd 15	2	0739	Sterdy Telephones, Ltd	126		0	763
Colt Ventilation, Ltd	3		0152				Stewart & Gray, Ltd	94		0	600
Compactom, Ltd	17		0153			7 0015	Stott, James, Ltd	104		0	602
Concrete, Ltd.	108		0154	Laing, John, & Son, Ltd		0345	Sulzer Bros. (London), Ltd	5	5 E	0	606
Corrie, J. B. (Flextella), Ltd	141		0228	Lead Development Association 13		0347	Surfex Flooring Co., Ltd	125		1	114
Costain Concrete Co., Ltd	115		1100		20	1182	Swiftplan, Ltd	2		9	613
Craig Silent Ballcock	151		0916	Leca (Gt. Britain), Ltd	20	1102					
Cullum, Horace W., & Co., Ltd	93		1131		(8 F	0357					
				Limmer & Trinidad Lake Asphalt	-	0001			_	٠.	
					13 F	0358	T. G. Fencing			] 1	184
Davidsons Paper Sales Ltd	88	Ш	0178		16		Thames Plywood Manufacturers,				
Du Pont Co. (United Kingdom).	-	-	0010	gow, aremosia a come, area			Ltd	51	3 [		124
Ltd	96		0818				Thermacoust, Ltd			4.5	629
				Mallinson, William, & Sons, Ltd 11	13 [	0379	Thorp, John B.		1	1,	1633
Electrical Development Ass.	125		0095		73	0407	Timber Development Association,			11	0635
Ellis School of Architecture			0202	Minnesota Mining & Manufactur-	-		Ltd				9637
English Clock Systems, Ltd	121		0205	ing Co., Ltd 1	14	1048	Tomo Trading Co., Ltd		-	- 1	-trai
Evode, Ltd.		-	0020	M.K. Electric, Ltd	8	0416	Ltd		a F	7 1	0640
Expanded Metal Co., Ltd		F	0211	Monsanto Chemical 24.	25	0421	True Flue, Ltd.		Moon		0641
				Montgomerie, Stobo & Co., Ltd	54	0422	Truscon, Ltd.				0645
				medically seen hard section 111111111111111111111111111111111111	66	0914	Tullis, D. & J., Ltd.			===	1164
F.E.B. (Great Britain), Ltd		San Park	0216	Morris Singer Co., Ltd 1	00	0424		-			
Falk, Stadelmann & Co., Ltd	85		0214								
Falk, Stadelmann & Co., Ltd			0893								
Ferodo, Ltd			0218	National Salt Glazed Pipe Manuf.			United Kingdom Provident Insti				
Fibreglass, Ltd			0219			1034	tution		8 1		0650
Finch, B., & Co., Ltd			1181		42	0433					
Flinkote Co., Ltd		- North	0229	Newman, William, & Sons, Ltd	6	0435					
Floor Quarry Association		- Control	0230	Newton Chambers & Co., Ltd 30,	10	0437					
Furse, W. J., & Co., Ltd	15	4	0241	North British Linoleum Co., Ltd.	13	0829	Toronto Diemond Ted		0 -	-	0656
For Appointments (Wanted or Vac Notices, Miscellaneous, Property and	ant), d Lan	Con	ipetition ilea, see	s Open, Drawings, Tracings, etc., Educati 43, 144, 146, 147, 148, 149, 150, 151, 152.	iona	l, Legal	Venesta Plywood, Ltd Versatile Fittings		9		0663
Minter to blood letters on too	DC -			profession and address hale-							
				, profession, and address below,							
and fold so that the post-pai	id ad	dre	ess is o	n the outside.			Walker, Crosweller & Co., Ltd		18		066
and total as muc me have her							Wallpaper Manufacturers, Ltd		16		067
							Walpamur Co., Ltd.		57	_	004
NAME		_				_	Ward & Co. (Letters), Ltd		65		067
							Weatherfoil, Ltd.		61	_	068
PROFESSION	-						Wednesbury Tube Co., Ltd		33		068
							Wiggin, J. & J., Ltd		80		118
ADDR MIS							Williamson, Jas., & Son, Ltd		07		069
							Winn, Charles, & Co., Ltd		32	=	069
							Wright, John		#5	-	221



# WITH THE OILO

PAT. No. 643103

REGD. DES. 858877

#### TOILET ROLL HOLDER



Q)





Roll cannot be removed but is free to revolve.



Special thief-proof acrews keep the

the effective barrier against the "couldn't care less" mentality that litters staff toilets—at the firm's expense. The Toilok Toilet Roll Holder "rations" one sheet at a time by special device, and is equipped with thief-proof fitting. Toilok stands up to hard usage and provides an answer to your overheads problem.

TOILOK TOILET ROLL HOLDER, available in white, cream or pastel green gloss enamel. Takes any type of toilet roll—but we recommend Toilok Medicated 7 oz. rolls.

We are exhibiting at the Building Centre, Store Street, Tettonham Court Road, W.C.I.

Write for illustrated folder

#### R.SCULTHORP & CO LTD

DEPT. TIO, BLACKFRIARS HOUSE, NEW BRIDGE STREET, LONDON, E.C.4 TELEPHONE: FLEET STREET 5754 (5 LINES)

# Ensure perfect flue operation...

with the

## TRUE FLUE Triple Unit

This refractory concrete membrane attachment obviates the difficulty experienced in the past in adequately throating the "gather-over" above a back boiler appliance owing to provision having to be made for the back flue. The Triple Unit Type "U" has been designed so that the Membrane Unit can be bedded in the correct position spanning the flue opening, providing adequate space for the back flue and correctly throating the fire. The cost of a rough lintol, if used, together with expensive labour involved in building up the gather-over more than offsets the cost of a Triple Unit, which is simply placed in position and the job is done.

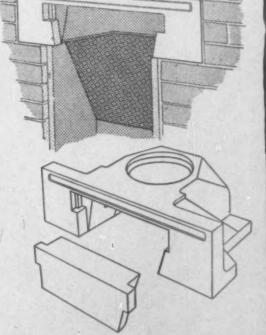
in position and the job is done.

Triple units with Back Attachments where required, are suitable for all open fire appliances with or without back boilers, and for free-standing stoves.

# TRUE FLUE

LIMITED

CONVECTOR HOUSE, ACACIA ROAD, ST. JOHN'S WOOD, LONDON, N.W.S.



TELEPHONE: PRIMROSE 7161/3/3

## **Britain's Tall Buildings**

Architects: G. S. Hay, F.R.I.B.A, Chief Architect, Manchester Co-operative Wholesale Society Ltd, in association with Sir John Burnet, Tait and Partners.

Engineering Services: G. K. Medlock, A.M.I.Mech.E, Chief Engineer, Manchester Co-operative Wholesale Society Ltd.

Structural Engineer: A. E. Beer, E.R.D, A.C.G.I, M.I.C.E, M.I.Struct.E.

One of the country's largest office blocks, the 400 ft. high new building for the Co-operative Insurance Society Ltd, will have a floor area of nearly 9½ acres, incorporating three levels of basement, a five-floor podium and a 25-storey tower.

Also included in the scheme, which is due for completion in 1962, is a Conference Hall to seat 1,000 and a 14-storey tower block to be occupied by the Co-operative Wholesale Society Ltd.

New Chief Offices for Co-operative Insurance Society Ltd, Manchester

LAING

John Laing and Son Limited Building and Civil Engineering Contractors Great Britain, Canada Union of South Africa, Rhodesia



